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ABSTRACT

This reference includes presentations that cover current research, best practices, and solutions to improve student achievement. The 25 chapters are: (1) "The Three Stories of Educational Reform: Inside; Inside/Out; Outside/In" (Michael Fullan); (2) "Hey, You with the Frontal Lobes: Brains for Educators, Educators of Brains" (Priscilla Vail); (3) "The Connections between Class Size and Student Success: A Mandate" (Charles Achilles); (4) "Student Self-Evaluation: What Research Says and What Practice Shows" (Carol Rolheiser); (5) "URGENT MESSAGE: Engaging Parents To Improve Student Achievement" (Anne Henderson); (6) "From Oracy to Literacy: Helping Children Attain Academic Success" (Katharine Butler); (7) "Reforming Teacher Education: New Rhythms for the Different Drummer?" (Jeffrey Gorrell); (8) "Discipline-Based Art Education: SmartArt" (Susan Holman); (9) "Connectedness: A Legacy to Our Children" (Edward M. Hallowell); (10) "Paying Attention to Attention: The Connection between Attention and Learning" (Gerard A. Ballanco); (11) "Reading Development, Reading Disorders, and Reading Instruction: Contributions from Research" (Reid Lyon); (12) "Teaching for Creativity: Two Dozen Tips" (Robert Sternberg); (13) "To Touch a Child's Heart and Mind: The Mindset of the Effective Educator" (Robert Brooks); (14) "The Mechanics of Remembering: Tricky Memory and Memory Tricks" (Glenda Thorne); (15) "The Juvenile Offender: An Opportunity To Change a Life" (David Admire); (16) "Dyslexia: What Is It, Really? Personal Reflections and Scientific Fact" (Emerson Dickman); (17) "Teacher Education Reform: So What's Important?"; (18) "Accountability"; (19) "Equity"; (20) "Solutions to the Reading Crisis"; (21) "Helping at Home"; (22) "Medicine, Learning and

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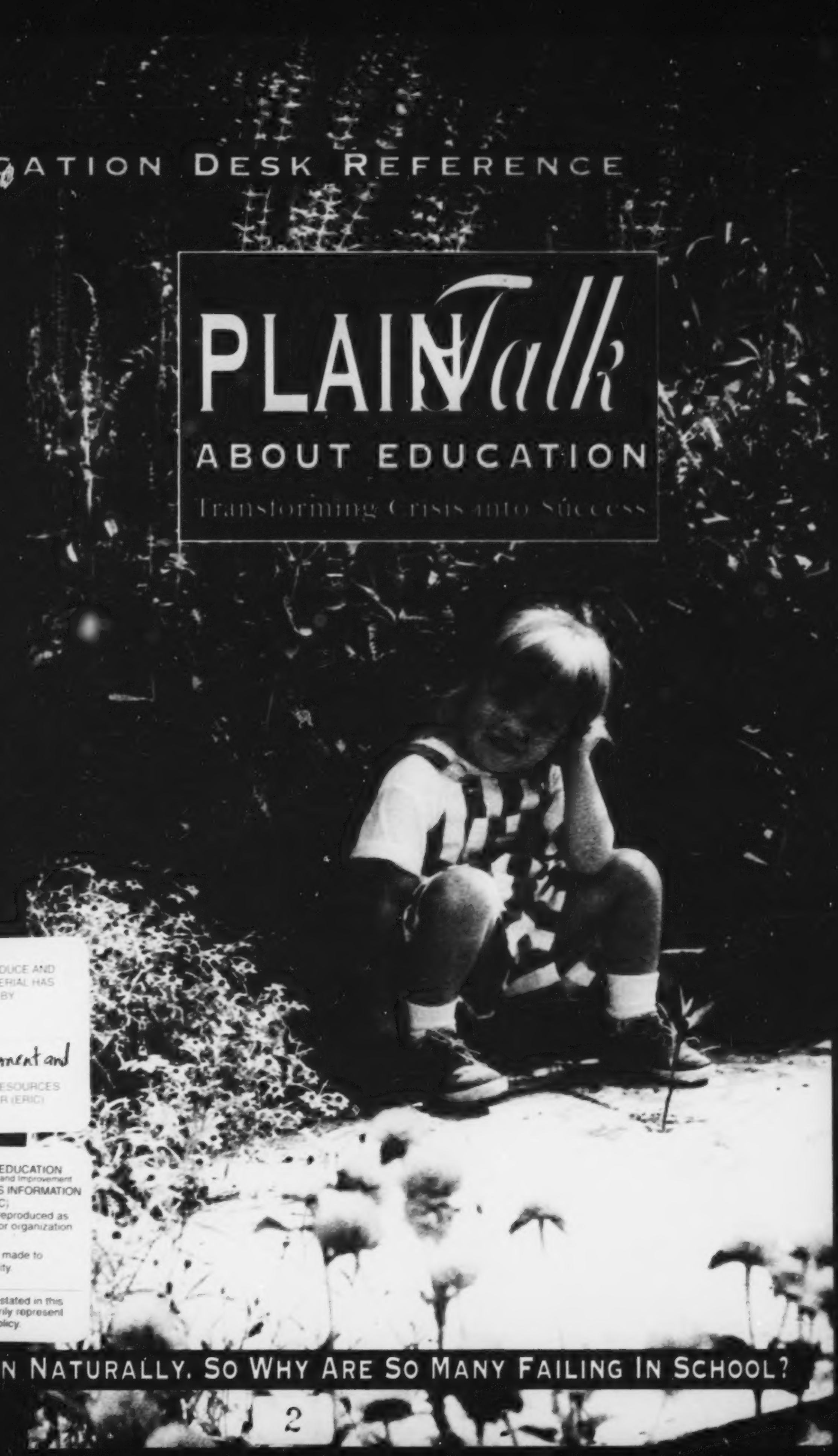

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CHILDREN LEARN NATURALLY. SO WHY ARE SO MANY FAILING IN SCHOOL?

PLAIN Talk
ABOUT EDUCATION

FEBRUARY 8-10, 1999
HOTEL INTER•CONTINENTAL
NEW ORLEANS

A DESK REFERENCE ON EDUCATIONAL CHANGE

Robert D. Small, M. Ed.
Vice President of Administration

Alice P. Thomas, M. Ed.
President and CEO

Co-Editors

Center for Development and Learning (CDL)
Covington, Louisiana

Center for Development and Learning
208 South Tyler Street
Covington, LA 70433
(985) 893-7777
www.cdl.org

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To Francoise Richardson
For her steadfast support of our work and
her belief in what we do

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PREFACE

Consilience: (k ∂n sil' e ∂nc) n. Coming together; unity

With regard to learning about learning, these are exciting times. Recent research has allowed us to know more about the neurological and psychological processes involved in learning because of extensive research in brain function as well as educational and psychological research on the learning process. This research has uncovered the rich diversity in the way that human minds operate: how we learn, process information, and remember.

It is a shame that most teacher development programs, both preservice and inservice, fail to make use of this wide and rich body of knowledge. More times than not, educational research is diluted into "watered down tea" for teachers, and scientific research from the medical and psychological fields often fails to reach teachers at all.

In the same way, other professionals - physicians, psychologists, juvenile judges, and judicial social workers - who provide direct services to children seldom access and integrate the rich wealth of information that teachers hold. Thus, in our true Western way, efforts to improve schools, reduce violence, reduce poverty, improve health issues, and move forward with scientific and medical breakthroughs have progressed on separate tracks that have failed to connect and share research and new knowledge that would benefit all. Teachers remain isolated from physicians, psychologists, parents, judges, and judicial professionals, and they from teachers.

As the Center for Development and Learning (CDL) worked to improve educational opportunity for all children, almost always our search conjured up more questions than answers. The more we looked, the more we realized that answers lay not in one place, tidily stacked awaiting our arrival. Looking only in one place was just plain inefficient and largely ineffective. Recognizing this inefficiency, and seeking more effective ways, CDL began working to create a conduit to access, connect, and integrate new knowledge from related fields.

In making these connections, we found ourselves more effective and efficient in our work, but we were surprised to find ourselves largely alone. "To my knowledge, CDL is the only organization worldwide working to connect knowledge from the medical, psychological, educational and judicial fields in order to multiply the benefits to children," states Michael Fullan, dean of the Ontario Institute for Studies in Education at the University of Toronto.

Knowledge connection, according to Michael Fullan, is critical to recreating and restructuring our schools. CDL believes it is critical to future advances in medical, judicial and psychological fields as well. Edward O. Wilson, Pulitzer Prize winning author, entitled his most recent book *Consilience: The Unity of Knowledge*. We believe it is consilience, or the coming together of knowledge, that will allow us to move forward at an enlightened pace.

By presenting the most current research, theory, and practice from the medical, judicial, psychological and educational fields at the third PLAIN TALK Summit, therefore, CDL sought to connect the knowledge and skills across disciplines. By connecting our knowledge and skills, we believe all disciplines will have more potential to construct comprehensive solutions for effective and equitable education, physically and mentally healthy communities, and caring, connected support systems for our children.

Four broad disciplines were brought together at the PLAIN TALK Summit: medicine, law, psychology and education. Each discipline has its own practitioners, modes of analysis, and standards of validation. And yet each has knowledge, principles, and practices that can help improve the life chances for our children.

As we bring these fields of knowledge together, we need to ask:

- What is the relation between medicine and education, and how is it important for children?
- What is the relation between psychology and education, and how is it important for children?
- What is the relation between the judicial system and education, and how is it important for children?
- What is the relation between medicine and the judicial system, and how is it important for children?
- What is the relation between psychology and medicine, and how is it important for children?
- What is the relation between psychology and the judicial system, and how is it important for children?

A full and balanced perspective cannot be acquired by studying these disciplines separately, but through the pursuit of connecting and combining their knowledge. We need to seek *consilience*, the unity of knowledge. When we have unified the relevant knowledge that each contributes, we will understand better how to educate all children, how to help them learn to higher levels, how to help them become healthier both physically and mentally, and how to help them become happy, productive community members.

We have organized the first sixteen chapters of the proceedings under four main headings: Education, Psychology, Medicine, and Justice. Professionals from the educational field author chapters one through five. Chapter One, entitled *Three Stories of Educational Reform: Inside; Inside/Out; Outside/In*, authored by Michael Fullan, describes strategies for managing change under complex conditions, the benefits of collaborative learning communities, the importance of understanding the change process, and developing alliances with parents, community and outside agencies. In Chapter Two, *Hey, You With the Frontal Lobes: Brains for Education and Education for Brains*, Priscilla Vail tells how and why people learn, and gives practical applications and implications for home and school. Charles Achilles talks about *The Connection Between Class Size and Student Success: A Mandate* in Chapter Three. Using the Tennessee study, he explains the relationship between smaller class size and increased student achievement, and how to gain smaller class sizes by restructuring school districts rather than increasing budgets. In Chapter Four, entitled *Student Self-Evaluation: What Research Says and What Practice Shows*, Carol Rolheiser discusses the value of student participation in evaluations, describes student self-evaluation techniques, and presents a four-stage self-evaluation model.

Anne Henderson, in Chapter Five, *URGENT MESSAGE: Engaging Parents to Improve Student Achievement*, argues that engaging families and communities increases student achievement, especially in inner-city "fortress schools". Chapter Six, *From Oracy to Literacy: Helping Children Attain Academic Success*, finds Katharine Butler explaining the literacy continuum – its nature and changing features. In Chapter Seven, *Reforming Teacher Education: New Rhythms for the Different Drummer?*, Jeffery Gorrell gives examples of reform at the college level and talks about their implications for public education. Multi-sensory art in the classroom curriculum, techniques to bring art into science, math, literature, social studies, language arts, and foreign language classes, and improving learning and memory skills through art are described by Susan Holman in Chapter Eight, *Discipline-Based Art: Education: SmartArt*.

Professionals in the medical field contribute the next two chapters. Chapter Nine, entitled *Connectedness: A Legacy To Our Children*, holds Edward M. "Ned" Hallowell's thoughts on the different kinds of connectedness and how connectedness enriches our lives. In Chapter Ten, *Paying Attention to Attention: The Connection Between Attention and Learning*, Gerard A. Ballanco explains how attention difficulty interferes with learning, how learning difficulty makes paying attention difficult, and how emotional problems impact attention. Finally, he offers management suggestions for better attention.

Chapters eleven through fourteen are written by professionals from the field of psychology. In Chapter Eleven, entitled *Reading Development, Reading Disorders, and Reading Instruction: Contributions from Research*, Reid Lyon discusses current research related to reading development and instruction, early identification procedures and application on early intervention programs, and implications of the research for better educating our nation's children. Robert Sternberg, in Chapter Twelve entitled *Teaching for Creativity: Two Dozen Tips*, defines creativity and outlines keys for developing creativity.

To Touch a Child's Heart and Mind: The Mindset of the Effective Educator is the title of Chapter Thirteen by Robert Brooks. In it he examines educators' and parents' influence on a child's life, environments in which children will be motivated and excited to learn, and practical ideas that adults can utilize to motivate and empower children. Chapter Fourteen, *The Mechanics of Remembering: Tricky Memory and Memory Tricks*, by Glenda Thorne, covers memory processes and systems, memory demands on school-age children and adolescents, the characteristics and behavior of students with memory problems, and strategies for improving memory.

Two professionals from the judicial field author chapters fifteen and sixteen. The Honorable David Admire writes Chapter Fifteen, *The Juvenile Offender: An Opportunity to Change a Life*. Judge Admire explains how to develop an approach and strategy for the courts, detention facilities, school systems, police departments, and volunteers to intervene in children's lives. Attorney Emerson Dickman, in Chapter Sixteen, *Dyslexia - What Is It, Really? Personal Reflections and Scientific Fact* describes the unique strengths of individuals with dyslexia and suggests ways to understand, remediate, accommodate and compensate for deficits.

No summit is complete without a hearty discussion of the issues. Chapters seventeen through twenty-five hold summaries of those discussions. Chapter Seventeen summarizes a panel discussion on *Teacher Education Reform: So What's Important?*, covering such issues as preservice education vs. inservice education, standards for quality staff development and adherence, and what teachers want vs. what they're getting. Issues surrounding *Accountability* are found in Chapter Eighteen, including specific accountability mechanisms that work, the idea of funds based on results, shared responsibility, and teacher effectiveness and students' scores on standardized tests. Chapter Nineteen summarizes a panel discussion on *Equity*. In Chapter Twenty, three experts discuss *Solutions to the Reading Crisis*, including different methods and programs for teaching reading.

Helping at Home, including homework horror, treaties for parents, educators and students and who's asking too much, is found in Chapter Twenty-One. Chapter Twenty-Two holds a summary of a lively discussion on *Medicine, Learning and School*, where such topics as the most effective and commonly prescribed medications for mental and behavioral disorders, measures to prevent over-reliance on medications, psychopharmacological Calvinism, and standards for prescribing medications are discussed. In Chapter Twenty-Three, *Increasing Family Involvement*, panelists discuss how to involve parents, and their mutual obligations and contributions. Chapter Twenty-Four discusses *Teacher Education in Louisiana: Next Steps Discussion* - where do we go from here, and guidelines for action. In the concluding chapter, Chapter Twenty-Five, panelists answer, *So What's Worth Fighting for In Education?*

We hope that, as you read the proceedings, you will actively look for consilience and consider what we can do to move forward. Can we take the knowledge from the different disciplines and combine it to more effectively improve the quality of life for our children?

We think that together, we can. After all, the children are counting on us.

Alice Thomas
Robert Small
Center for Development and Learning

ACKNOWLEDGMENTS

The PLAIN TALK ABOUT K.I.D.S.® 1999 summit was a true collaboration. We would like to acknowledge a group of individuals for their guidance, assistance, and support. Many thanks to our co-chairs Mr. and Mrs. St. Denis J. Villere, Robert D. Reily, Dr. and Mrs. John L. Ochsner, and Marian Arrowsmith; to Judy Greene for organizing the joint dinner between our Board of Trustees and Advisory Board; and to the CDL Board of Trustees, the corps of volunteers, the CDL consultants, and the CDL staff, whose teamwork helped make everything run so smoothly.

On behalf of the staff and Board of Trustees of CDL, we express gratitude to the following funding sources: AHEC Southeast Louisiana, Marian Arrowsmith, Gerard A. Ballanco, M.D., Baptist Community Ministries, Bellsouth Telecommunications, Joe and Dorothy D. Brown Foundation, Chevron, Jack Donohue, Catherine Favret, Classic Foundation, Ear, Eye, Nose and Throat Foundation, Compaq Classic of New Orleans, Mark Files, Franklin Electronic Publishing, Goldring Family Foundation, Greater New Orleans Foundation, Honorable John W. and Judy Greene, Mrs. T. M. Harris, Heymann Foundation, Hever Foundation, Christian Humann Foundation, Institute of Mental Hygiene, Eugene and Joseph Jones Foundation, Keller Family Foundation, Cheryl and George Lilly, McCormick Tribune Foundation, Dr. and Mrs. John L. Ochsner, Omni Bank, Robert D. Reily, Reily Foundation, Mr. and Mrs. Winston Rice, Richards Family Foundation, Francoise B. Richardson, RosaMary Foundation, Shell Foundation, Shell Offshore, Spartan Builders, Texaco, Toler Foundation, Video Journal of Education, Mr. and Mrs. St. Denis J. Villere, Mary Freeman Wisdom Foundation and the Zemurray Foundation. The combined support received from these individuals, foundations, and corporations has made PLAIN TALK ABOUT K.I.D.S.® and other CDL projects possible.

We thank you for your faith in our mission and our work.

CHAPTER ONE

The Three Stories of Educational Reform:

Inside; Inside/Out; Outside/In

MICHAEL FULLAN, PH.D.
Dean, Ontario Institute for Studies in Education (OISE)
University of Toronto

There has been a great deal of discussion about top-down and bottom-up strategies for educational reform and the need to combine the two. In light of the growing knowledge base, and the increased urgency to see deep, lasting and large-scale reform, I believe that a more productive formulation combines inside and outside-the-school perspectives. I refer to this as the three stories of reform.

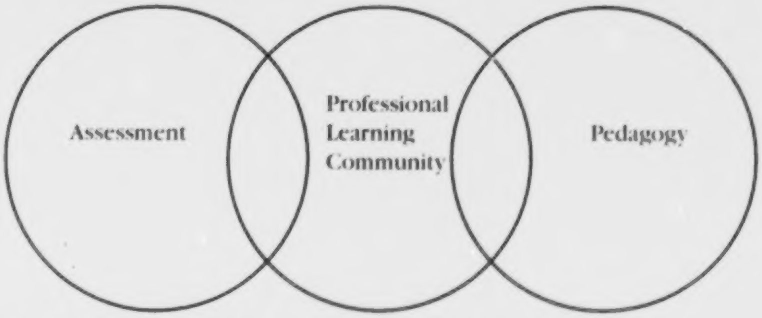
The first is 'the inside story' — what do we know about how schools change for the better in terms of their internal dynamics? The second orientation is the 'inside-outside' story — what do effective schools do as they contemplate the plethora of outside forces impinging on them? The third perspective is the 'the outside-in' story — how do external-to-the-school agencies — organize themselves if they wish to be effective in accomplishing large-scale reform at the level of schools? Taken together three stories provide a powerful and compelling framework for accomplishing education reform on a scale never before seen.

The Inside Story

Many of us have found that collaborative work cultures (or professional learning communities; I use the terms interchangeably) make a difference in how well students do in school. Until recently, however, we did not know very clearly how these schools operate to produce such effects. Thanks to Newmann and Wehlage (1995) and their colleagues Louis and Kruse (1995), we now have a much better idea of what is going on inside the black box of collaborative schools. I call this the inside story.

Newmann and Wehlage and their colleagues found that some schools did disproportionately well in affecting the performance of students. The essence of their finding is that the more successful schools had teachers and administrators that (a) formed a professional learning community, (b) focused on student work (assessment), and (c) changed their instructional practice (pedagogy) accordingly to get better results. They did all of this on a continuous basis (see Figure 1).

Figure 1: The Inside Story of Collaboration



Thus, for example, Newmann and his colleagues observe:

> When students and teachers send clear and consistent messages to one another about the objectives and methods of learning, learning is more likely, because student and faculty effort can be directed more effectively toward intellectual ends. When school goals are vague or when consensus is low, teachers may feel comfortable with the autonomy they have to pursue their unique interests. But individual autonomy can reduce teacher efficacy when teachers can't count on colleagues to reinforce their objectives. In contrast, clear-shared goals maximize teacher success through collective reinforcement.
>
> Second, collaborative activity can enhance teachers' technical competence. As teachers work with students from increasingly diverse social backgrounds, and as the curriculum begins to demand more intellectual rigor, teachers require information, technical expertise, and social-emotional support far beyond the resources they can muster as individuals working alone. When teachers collaborate productively, they participate in reflective dialogue to learn more about professional issues; they observe and react to one another's teaching, curriculum, and assessment practices; and they engage in joint planning and curriculum development. By enriching teachers' technical and social resources, collaboration can make teaching more effective.
>
> Third, clearly shared purpose and collaboration contribute to collective responsibility: one's colleagues share responsibility for the quality of all students' achievement. This norm helps to sustain each teacher's commitment. A culture of collective responsibility puts more peer pressure and accountability on staff who may not have carried their fair share, but it can also ease the burden on teachers who have worked hard in isolation but who felt unable to help some students. In short, professional community within the teaching staff sharpens the educational focus and enhances the technical and social support that teachers need to be successful. (Newmann & Wehlage, 1995:31)

Newmann and Wehlage report that schools with high 'professional community' have significantly higher achievement scores in mathematics, science, and social studies.

A second example is provided by Bryk, et al (1998) in their longitudinal study of the impact of the Chicago school reform over the past decade. They found that schools that made a difference worked differently as professional communities of teachers discussed and acted on new ideas:

> In schools making systemic changes, structures are established which create opportunities for such interactions to occur. As teachers develop a

broader say in school decision-making, they may also begin to experiment with new roles, including working collaboratively. This restructuring of teachers' work signifies a broadening professional community where teachers feel more comfortable exchanging ideas, and where a collective sense of responsibility for student development is likely to emerge. These characteristics of systemic restructuring contrast with conventional school practice where teachers work more autonomously, and there may be little meaningful professional exchange among co-workers. (p. 128)

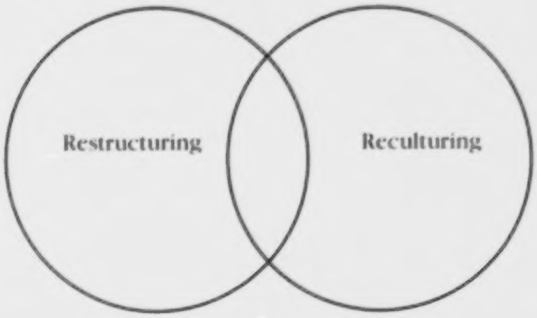
What's new about these findings is that they unlock the black box of collaboration. We now see for the first time some of the inner workings of collaborative schools. They reveal, for example, a new role for teachers working on assessment of student work. In *What's Worth Fighting For Out There*, Hargreaves and I concluded that teachers must "become more assessment literate." (Hargreaves & Fullan, 1998). The "inside story of reform" makes this role clear. By assessment literacy internal to the school we mean two things: (1) the ability of teachers, individually and together, to interpret achievement data on student performance, and equally important, (2) the ability to develop action plans to alter instruction and other factors in order to affect student learning positively.

Put another way, even if there was no external accountability, teachers and principals would need to become assessment literate in order to be successful. In collaborative schools, pedagogy and assessment feed on each other, through the interaction of teachers to produce better results.

The clarity of this finding is significant, but there is one fundamental remaining problem. The researchers who report these results found collaborative (or non-collaborative) schools as they were, i.e., once they were "up and running." We know nothing about how these particular schools got that way, let alone how we would go about producing more of them. The particular pathways to collaboration in new situations remain obscure. Indeed, Hargreaves and I (1998) argue that even if you knew how particular schools became collaborative, it could never tell you precisely how you should go about it in your own case. There is no magic bullet; research can give us promising lines of thinking but never a complete answer. Each group to a certain extent must build its own model, and develop local ownership through its own process.

As local groups draw on the inside story, there is an additional distinction that can be quite helpful, namely the difference between 'restructuring' and 'reculturing' (Figure 2).

Figure 2: Restructuring and Reculturing



Restructuring as the term suggests is just that — changes in the structure, roles and related formal elements of the organization. The requirement that each school should have a site-based team, or local school council, is a good example. If we know anything about restructuring it is that (a) it is relatively easier to do, i.e., restructuring can be legislated, and (b) it makes no difference by itself to improvement in teaching and learning. What does make a difference is reculturing — defined as the process of developing professional learning communities in the school, i.e., going from a situation of limited attention, to assessment and pedagogy, to one where teachers and others routinely focus on these matters and make associated improvements. Structure can block or facilitate professional community, but it is really reculturing that must become the key driver. When this happens, deeper changes in both culture and structure are accomplished.

The first story, in short, is that there is no substitute for internal school development. We have an increasingly clear idea about what is needed, but not how to do it on a wide scale. The other two stories help in this regard.

The Inside-Out Story

While the first story says that schools would be well-advised to turn their focus on reculturing, the second story says that they cannot do it alone. Hargreaves and I (1998) made the case that the external-to-the-school context has changed dramatically over the past five years. The walls of the school have become more permeable and more transparent. Teachers and principals now operate under a microscope in a way that they have never had to do before. This new environment is complex, turbulent, contradictory, relentless, uncertain and unpredictable, yet it increases the demands for better performance and accountability of its schools. In light of this new reality, teachers and principals must reframe their roles and orientations to the outside.

In other words, the 'out there' is now 'in here'. Previous outside forces are now in teachers' faces every day. The first lesson of the inside-out story is counter-intuitive. Most outside forces threaten schools, but they are also necessary for success. In order to turn disturbing forces to one's advantage, it is necessary to develop the counter-intuitive mind-set of 'moving toward the danger (Hargreaves & Fullan, 1998).

Leonard (1995) draws a similar conclusion in her study of successful business organizations involved in technology. These companies combine internal problem-solving with constant pursuit of external connections. In particular, says Leonard, these firms (1) create porous boundaries, (2) scan broadly, (3) provide for continuous interaction with the environment, (4) nurture technological gatekeepers, (5) nurture boundary spanners, and (6) fight the not-invented-here syndrome. (pp. 155-156)

In *What's Worth Fighting For Out There*, we said that schools must link to at least the following five powerful external forces:

1. Parents and community
2. Technology
3. Corporate connections
4. Government policy
5. The wider teaching profession

When there is a rapport among parents/community, teachers/school and the student, learning occurs. The problem is what to do when such rapport does not exist. In Patrick Dolan's (1994) words, you have to involve parents in as many activities as possible and "work through the discomfort of each other's presence." Effective schools use their internal collaborative strength to seek out relationships with the community. They see parents as part of the solution more than part of the problem. They pursue programs and activities that are based on two-way capacity building in order to mobilize the resources of both the community and the school in the service of learning (Epstein, 1995).

Bryk, et al (1998) in the Chicago study provide further confirmation of these findings:

> Schools pursuing a systemic agenda have a "client orientation." They maintain a sustained focus on strengthening the involvement of parents with the school and their children's schooling. They also actively seek to strengthen the ties with the local community and especially those resources that bear on the caring of children. As these personal interactions expand and become institutionalized in the life of the school, the quality of the relationships between local professionals and their community changes. Greater trust and mutual engagement begins to characterize these encounters. In contrast, schools with unfocused initiatives may set more distinct boundaries between themselves and their neighborhoods. Extant problems in these relationships may not be directly addressed. The broader community resources that could assist improvement efforts in the schools are not tapped. These schools remain more isolated from their students' parents and their communities. (pp. 127-128)

The second external factor is technology. It is, of course, ubiquitous. The issue is how to contend with it. Our conclusion in ***What's Worth Fighting For Out There*** was that the more powerful that technology becomes, the more indispensable good teachers are. Technology generates a glut of information, but is not particularly pedagogically wise. This is especially true of new breakthroughs in cognitive science about how learners must construct their own meaning for deep understanding to occur. This means that teachers must become the pedagogical design experts, using the power of technology — something that they are not yet prepared to do, but is part of the ***getting out there*** story.

Third, corporate partnerships are on the rise, and if schools are to hold their own in this new arena, they must know what they are doing. Getting out there means developing the criteria and confidence to form productive alliances. Collaborative schools are less vulnerable, more confident and more open to outside relationships.

Fourth, government policy has also become increasingly demanding. Accountability and assessment policy is a good case in point. Assessment literacy, which I referred to earlier, has an inside-out dimension. To put it directly, teachers must become experts about external standards. On the political side, they must move towards the danger by entering the fray, and by participating in the debate about the uses and misuses of achievement results. They must also take advantage of external standards to help inform what they are doing. It turns out that collaborative schools are active and critical consumers of external standards. They use standards to clarify, integrate and raise their expectations, and they want to know how well they are doing so that they can celebrate and/or work at getting better. Newmann and Wehlage (1995) also argue that external standard setting by professional organizations and states is an essential component of reform. From the inside-out perspective, schools that do well seek and make use of standards as part and parcel of their school improvement plans. In a word they become assessment literate as they relate their performance to external standards. As Newmann and Wehlage (1995:41) put it, "without clear, high standards for learning, school restructuring is like a rudderless ship."

The final set of key external forces concerns the current preoccupation with developing the teaching force. School improvement will never occur on a wide scale until the majority of teachers become contributors to and beneficiaries of the professional learning community. Again, effective schools see themselves as part and parcel of this wider movement. They, of course, create conditions for continuous learning for their own members. But they do more than this. They engage in partnerships with local universities and/or become members of other reform networks. They see themselves as much in the business of teacher education as in the business of school improvement. They have explicit criteria for hiring, they pay attention to induction, they support learning opportunities for their members, they look for reform-oriented union leadership, they provide a laboratory for student teachers, and so on. In short, they take advantage of new developments in the teaching profession, but they also give as much as they get through active participation in helping to reshape the profession as a whole.

To summarize the critical importance of the inside-outside story, schools *need* the outside to get the job done. These external forces, however, do not come in helpful packages; they are an amalgam of complex and uncoordinated phenomena. The work of the school is to figure out how to make this relationship productive.

What does the outside look like to schools? Essentially, it is a sea of overloaded, inconsistent, relentless demands. Policies are replaced or overtaken by new ones before they have had a chance to be implemented. One policy works at cross-purposes to another one. Above all, the set of demands are disjointed. Fragmentation, overload, incoherence appear to be the natural order. The time line for implementation is always shorter than the timeline for the next election.

One key to understanding the inside-out story is the realization that collaborative schools do not take on the most number of innovations; they do not engage in the sheer, highest number of staff development days. Bryk et al (1998) call these the 'Christmas tree schools' as they indiscriminately take on every innovation that comes along. By contrast, effective schools are highly selective, with respect to external innovations. They select and integrate innovations; they constantly work on connectedness; they carefully choose staff development, usually in groups of two or more, and they work on applying what they learn.

In other words, the ultimate effect of schools that get their act together inside, and that participate outside, is that they 'attack incoherence' (Bryk, et al, 1998). They deal with the outside, partly to take on negative forces, partly to ferret out resources (some of which are previous negative forces converted to support), and partly to learn from the outside. In a nutshell, the inside-out story is one of mobilization of resources and coherence making.

The Outside-In Story

If you are on the outside and the first two stories are not happening the way they are supposed to, what do you do? Here is where the story gets complex. We know a great deal about individual school success; we know far less about school system success — how large numbers of schools in the same system can accomplish improvement. As we try for and pay attention to large-scale reform, as has been the case over the past few years, we are beginning to get greater clarity about the elements of this third story.

An excellent example at the district level is Elmore and Burney's (1998) study of the development of District #2 (with 48 schools) in New York City. Newmann and Wehlage (1995) examined effective *schools*. Far less is known about effective *school districts*. Elmore and Burney report that District #2 is achieving results across a number of schools, and identify five action principles that guide the system-level administrators:

Principle 1: Principals are the key actors in instructional improvement.

Principle 2: Each school presents a unique bundle of attributes into a unique set of instructional improvement problems: "Systemic improvement required a high level of knowledge about the particularities of schools, but [district administrators] viewed this knowledge as critical intelligence about how to develop the competency of principals to deal with their setting and how to adapt district-level resources to the unique bundle of attributes and problems in the school. (p. 17)

Principle 3: Sustained instructional improvement is a process of bilateral negotiation between system-level administrators and principals: "In all cases, there is no question that both system administrators and principals expect to negotiate, and the process of negotiation is the main vehicle by which they arrive at a common understanding of what will happen around instructional improvement in the school ... In essence ... bilateral negotiation is an arena for learning. (p. 18)

Principle 4: Common work among principals and teachers across schools is a source of powerful norms about system-wide instructional improvement: "Professional development ... takes the form of activities designed to break down the isolation of principals and teachers. (p. 18)

Principal 5: Instructional improvement is primarily about the depth and quality of student work: "As the strategy has matured ... district administrators, and consequently professional developers and principals, have focused increasingly on what they call high quality student work [they seek] evidence of the increasing sophistication and complexity of student work." (p. 19)

District #2 administrators work differentially with schools depending on the level of development of each school while forging common norms and common standards. Clearly this is an example of district reculturing.

Of course, the district is only one level of the outside infrastructure. It is beyond the scope of this article to conduct an analysis of the different levels of the outside structure. (I do this in *Change Forces: The Sequel*, Fullan, 1999), including addressing the question of the complexities of transferability of innovations.) I can, however, map out the main conceptual components of the outside system. Basically, the question is what kind of external reform infrastructure is most likely to produce scores of inside and inside-out stories of the kinds described above.

Although Bryk, et al (1998) identify four main elements of the external structure, as applied to large district, they can be extrapolated for the whole system. The four components identified by Bryk, et al (1998) are: policies focusing on decentralization, local capacity building, rigorous external accountability, and stimulation of innovation.

The first step is to realize that the goal is to help/get schools to function as described in stories one or two. Clearly you can't *make* schools operate this way, but you can conclude that there is no chance whatsoever of large scale reform without movement in these directions. Thus, the first element is to maintain and develop *decentralization policies*. This would involve retaining or strengthening site-based emphasis and local district responsibilities (but remember reculturing) and reversing policies that stand in the way of reform. Healey and De Stefano (1997) call this "clearing policy space" and "filling policy space" with new policies more appropriate to local development.

While the first element says trust decentralization, the other three, in effect, say "but not completely." We have known for some time that decentralization per se does not produce large-scale change (or much small change for that matter). The trick is not to abandon it but strengthen it. The second aspect, *local capacity building*, does just that. Here the investment is in policies, training, professional development, ongoing support, etc. in order to develop the capacity of schools, communities and districts to operate *a la* stories one and two. These activities range from training for school teams, local school councils, redesign of initial teacher education, and the panoply of new activities that will be needed to prepare teachers, principals, parents, and so on to function as professional learning communities inside and outside the school.

Third, *a rigorous external accountability system* must be built into the infrastructure. We have already seen that schools do best when they pay close attention to standards and performance. The external accountability system generates data and procedures that make this more likely and more thorough. However, such a system must be primarily (not exclusively, as we will see in a moment) based on a philosophy of capacity building, *i.e.*, a philosophy of using 'assessment for learning' and otherwise enabling educators to become more assessment literate. No external formal accountability system can have an impact in the long run unless it has a capacity building philosophy. While this is the foremost primary goal, the external accountability system must also have the responsibility to intervene in persistently failing situations. Balancing accountability support and accountability intervention is obviously a tough call, but this is precisely how sophisticated the external infrastructure must become.

Fourth, ideas are important; scientific breakthroughs about learning are on the rise; innovations are being attempted around the world. Therefore, the *stimulation of innovation* must be a strong feature of the infrastructure. Investments must be made in research, development, innovative networks, etc., so that the marketplace of educational ideas is constantly being stimulated. The external system must help schools and school districts access ideas, and through capacity building, support the development of accountable professional communities.

The Three Stories in Concert

The inside/out reciprocity that I have described provides a much more powerful and specific metaphor than the more general classification that top-down/bottom up combinations are required. The three stories framework is indeed compelling. Sustained change is not possible in the absence of a strong connection across the three stories. Internal school development is a core requirement. But this cannot occur unless the school is proactively connecting to the outside. Schools that do develop internally, and do link to the outside, are still not self-sufficient. It is possible for these schools to develop for a while on their own, but in order for this development to be sustained, they must be challenged and nurtured by an external infrastructure.

What happens as the three stories coalesce is that there is a fusion of three powerful forces — the spiritual, the political and the intellectual (Fullan, 1999). The spiritual dimension has to do with the purpose and meaning of reform. The moral purpose of reform is to make a difference in the lives of students. I have argued elsewhere that concern for finding spiritual meaning in reform is on the ascendancy (Fullan 1999). The purposeful interactions that occur within and across the learning communities serve to mobilize moral commitments and energies. Second, mobilization is power so that the political capacity to overcome obstacles and to persist despite setbacks is also enhanced. Third, good ideas in the marketplace, hitherto not noticed or not implemented become more accessible as schools and school systems increase their capacity to find out about, select, integrate and use new ideas effectively.

The main enemies of large-scale reform are overload and extreme fragmentation. The three stories are essentially coherence-making capacities in an otherwise disjointed system. All those involved in reform from the schoolhouse to the statehouse can take advantage of the growing knowledge base embedded in the framework by working to establish more and more examples of what the three stories look like in practice. The prospects for reform on a large scale have never been better or more needed, but it will take the fusion of spiritual, political and intellectual energies to make it happen.

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CHAPTER TWO

HEY! YOU WITH THE FRONTAL LOBES:
Brains for Educators, Educators of Brains

PRISCILLA L. VAIL, M.A.T.
Learning Specialist and Author, Bedford, New York

For those of us who are not neurologists, keeping up with the deluge of current and recent research is like trying to drink from a fire hose. We try to absorb information from the fire hose of knowledge from the scientific quarter on how people learn, how and what we remember, what our pineal glands are up to, how neurotransmitters grease our wheels, and how the processes hidden under the bones of our heads and the skin of our bodies influence the following four:

- acquisition of skills and concepts
- use of skills and concepts
- memory of skills and concepts
- accumulation and combination of skills and concepts

Researchers are researching, journals are journalizing, hypothesizers are hypothesizing, but although we, as educators and parents try to keep up to date, very little is offered by way of practical application for people in schools and at home. Thus, we are going to touch on nine topics seeing what we may glean.

1. Systems and Loops: feed back, feed forward and clover leaves

Remember the models of heads with squares marked all over them showing where functions are located in our brains? The people who made them were called phrenologists. Remember the four humors, which were thought to govern our dispositions? Remember the excitement of discovering the different functions of our right and left hemispheres? And every time we think we have our brains parceled out in tidy geometrical demarcations, along comes new information to prove us wrong. So, guess what? It's happened again.

From using dyes, imaging techniques, and observation, neurologists now know that while indeed certain functions such as the ability to name objects or recognize faces disappear when there's damage to certain parts of the brain, most of our human functions such as thought, emotion, reason, tap dancing, tennis, sculpting or recognizing constellations are fed by loops which feed backwards *and* forwards, by systems which interconnect specific brain functions, and by clover leaves which allow the vehicles of our minds to use the highways of our brains.

This tells us that each of us uses who we are in individual ways and that we human beings harness multiple processes to tasks as they are presented, and that "one size fits all" education is pedagogical Jurassic Park.

This *does not* mean we have to offer a designer-original-curriculum to each separate student, but, rather, that we must learn to combine visual aids with our words, hands-on opportunities as well as hours in book-bound research, and chances for students to see, hear, write and say. This does not mean we should dilute or dumb-down curriculum. It does mean we must honor the interdependent intricacy of thought.

2. Choreography: walking across the room, understanding words

Margaret Livingston from M.I.T. has been probing the secrets of the visual system. Her work teaches us that there are two main subsystems, drawing on two kinds of cells: magno and parvo. From even a sparse and dusty recollection of Latin, most of us will recognize that means large (magno) and small (parvo). One system monitors shapes and edges, the other is attuned to movement. The exquisite choreography in which these two move together allows us to walk across a room without bumping into furniture. We move at whatever pace we have selected, calling into play our motor systems, anticipation, memory, and goal. Loops and systems.

When we read, we also harness loops and systems: eye movement, word recognition, the connection between letters and sounds, awareness of roots and affixes, language comprehension, and many others. But if the magnos and the parvos are out of synch, the logical but as yet unproven theory is that we may have trouble with print.

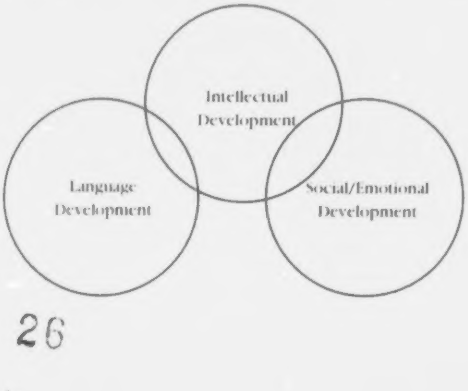
Parallel to this is the work of Paula Tallal who focuses on the auditory system. She finds similar cooperative dancing in smoothly functioning auditory processing, but arrhythmic (rushed, blurted, sporadic and undifferentiated) auditory function in many children with reading problems. Tallal's retraining of auditory choreography.

What we can glean from the works of Dr. Livingston and Dr. Tallal is that reading is a highly integrative process, which requires eyes, ears, motor, language, self-awareness, a supply of general information and concepts, and a multitude of skills, dancing in the service of reading. Many of these systems can help weaker ones if we call them all into play together. Thus multi-sensory techniques (VAKT) can help all readers. Although originally designed for dyslexic students, these methods and materials work in the regular classroom, used by the regular classroom teacher.

Peripherally, we now know that reading…decoding, encoding, syllabication, roots and affixes, and comprehension…need to be actively taught all the way through. Teachers must familiarize themselves with the successive levels of reading, and not expect exposure to provide osmosis.

3. Language: three circles

As the illustrations indicate, these three circles overlap, such that damage to one will hurt the others. Each depends on the others' intactness, fullness, and integrity.



What do we hope to see? What are trouble signs? Let's consider five aspects of intellectual development, which underlie academic power.

- Abstract concept development requires words.
- Memorization - rote of for reason - requires words.
- Making connections and drawing parallels requires words.
- Organizing intellectual intake and output requires words.
- Planning requires words.

What happens when - to paraphrase the old saying - the intellect is willing but the language is weak?

- When language and print don't relate, learning stalls. The newspaper reader who misreads ballet for battle delivers leaps and pirouettes instead of guns and mortars.
- When language doesn't root, concepts collapse. The reluctant reader, who wanted to sound fancy on a college application, wrote of a character in a Greek play, "This hero suffered from an edible complex."
- When language doesn't grow, children are limited to one meaning per word. Third grade Kenneth suddenly started having trouble in math. Puzzled, I went to observe and found the group doing conversion exercises: inches to feet, feet to yard, etc. After using manipulatives, the teacher said, "Now turn to page 37 in your book and use the table to do the rest of the problems." Kenneth opened his book, collected twelve rulers and tried to fit them on the table.

  I said, "Help yourself out; you can use the table."

  "I am," he said.

  I pointed to the shaded part of the page. "Do you know what this is?"

  "A chart or something, I guess."

  "It's called a table. You can use it to do all the problems without having to fool around with rulers and yardsticks."

  "Table? Are you kidding? I thought a table was furniture."

None of the other kids laughed, because Kenneth, the star hockey player, was a cool kid; the night before he had scored a hat trick against the Bedford Bears.

- When language doesn't connect, kids can't branch out. Low-language kids may learn to read individual words and even answer simple factual questions: What color was Ted's car? These same kids hit brick walls when asked to use inference: Why didn't Ted go home? Inference, along with other higher order reading comprehension skills, makes complex material comprehensible.

Third grade is a watershed year for this. Kids move from learning to read to reading to learn. Neurologically, a big switch takes place: early reading is pattern recognition, later reading (which starts in third grade) is language recognition. These two functions, lodged in different parts of the brain, are both necessary for a smooth journey along the reading continuum.

Third graders with weak language, who have happily memorized their arithmetic combinations, stall out on word problems.

- When language doesn't expand, children can't shift rhythms, activities, or lexicons as they try to manage smooth transitions.

Activities have different rhythms: "If we hurry along now, we can relax when we get to the beach." It's not just kids. Adults, too, appreciate warnings: "I'll pick you up in twenty minutes." Those whose language has not expanded to include such organizing words as later, until, before, whenever, or under no circumstances, don't have the verbal tools to wind down, phase out, or gear up.

Academic subjects have individual lexicons: "Which number is the *subtrahend?*" "*Primogeniture* governed the transfer of property." "Underline the *predicate*." "Move your *mouse*." "*Stage left*." "What *symmetry*." "*Half note*." "Use an *inclined plane*." Adults whose home lives, work lives, and recreational lives are integrated forget the linguistic shifts kids have to make as they move from one subject to another during a school day. Kids who have trouble remembering labels, learning new vocabulary, or jumping from one lexicon to another end up either overwhelmed or under-educated. Ideally, transitions help kids close the file on one set of ideas, open the file on what's to come, and even take a breath in between.

- When language doesn't flow, discourse jolts. Ponderous speakers or inefficient word searchers stupefy their listeners. People who blurt and compress their words are hard to follow.

Those whose handwriting doesn't keep pace with their ideas - in what the neurologists call "kinetic melody" - do poorly on written assignments. They either deliver factory outlet ideas to get rid of the task or dress their good ideas in ragged layout. Papers, which appear to represent marginal thought, may be graded accordingly.

- When language is too frail to marshall thoughts, words wander, ideas circle, concepts collide, facts shuffle, and information dissipates. What should be a dress parade turns "to the wind's march."

4. Social / Emotional Development

To journey from dependence to autonomy, the child must establish a sense of self as separate from others. This distinction between I and you, big news to the infant, opens the way to *mine and yours* - thus, the beginning of conscience. Children need a strong relationship with a caregiving adult to connect, to experience what feels good, and then to return the affection with such baby-generosities as smiles and coos.

With luck and some love from the world, humans move from self-awareness to self-acceptance, all the while using language to build connections with others. People connect with parents, peers, older and younger kids, strangers, fictional characters, authority figures, lovers, minions, bosses, and creatures of their own imaginings. Weaving with color, texture, and pattern, we shuttle back and forth on the loom of experience, binding together the warp and woof of emotion and connection.

The limbic system - the emotional brain - has the power either to open or close pathways, doorways, or windows to learning. It is the job of the limbic system to interpret the emotional content of incoming stimuli and then to broadcast that interpretation to the entire organism. The limbic system, operating below a conscious level, may say that a sound is neutral, that a person is threatening, or that a prospect is exhilarating. When the message is neutral, current flows evenly between perception, emotion, and thought. For example, as I am writing this, I can hear the sound of a jackhammer down the street. I recognize it, but it is neutral, a non-event.

A negative message shuts down power and breaks connections. Anger, fear, rejection, frustration, and prospects of failure or humiliation - all prompt the limbic system to broadcast an alarm. What happens to language in such circumstances? The person becomes cut-off from access to memory, the ability to reason, the ability to make novel connections, the ability to organize thought. These, of course, are closely interwoven with the whole language system.

A positive message opens lines, increases flow, and channels juice. Open circuits and flowing energy bring light to learning. The intellectual, language, and social/emotional circles reinforce as they connect.

Whatever the child's particular proclivities, social/emotional development overlaps and intersects with language in the following ways:

- The baby begins communicating first with fixed gaze, then with smiles and coos, then words, words, words.
- Toddlers establish boundaries and learn limits through words that include "Good!" and "No!"
- Preschoolers catalogue their worlds by finding out the names of things: "What's this?" They drive their parents nuts, but the results are worth the trouble.
- Preschoolers and nursery schoolers make jokes with word play; they consolidate their inner language and acquire social vocabulary, which directs interpersonal behaviors...most of the time.
- Kindergartners use words to share, take turns, hear stories, tell stories, and laugh superciliously at such wicked creatures as Curious George.
- First and second graders use words to explain, listen and empathize. Sam said to George, "Mrs. Smith said your grandmother died. So did my hamster. It's really sad." (That I myself am a grandmother gives me permission to tell that story. It's hard to imagine a higher compliment.)
- Third graders use words to bargain, to be cool, and to make friends in a new way; slinging gleeful insults and making puns. Pity the kid who can't join the repartee. What's the alternative? Revert to baby talk, become the class clown, and if you can't talk fast, burp fast.
- Fourth graders through law school students, and those on into the upper reaches of old age, use words to trade physical assault for verbal bargaining. They establish rules for games and argue loudly about changing or bending them. They use words to make friends, express disappointment, challenge loyalty, extend friendship, question procedure, or propose marriage.
- Throughout life, through language, each of us is the central character in the drama of our lives.

When language goes awry, social/emotional development suffers. Kids who lack the language for taking turns make enemies instead of friends. Weak language prevents sharing feelings, trading news, making plans. Kids who process language slowly may not hear or catch on to the new rules for the game, becoming pariahs in the process. It takes language to infer the acceptable code of group behavior and to conform one's own behavior to it. Kids who can't do that make themselves outcasts. Adolescents who lack the language to keep up seek maladaptive alternatives: anti-social outlets for frustration, immediate gratification, and mind-numbing painkillers.

So what are we supposed to do about all this?

1. Encourage children to play with language as they play with Legos: messing with words, inventing new ones, making up crazy combinations (invent a new fruit: ras-app-a-melon), rhyming, and taking words apart and putting them back together. This goes by the ten-dollar name of "auditory segmentation" but is nothing more than extracting and rearranging sounds within words. Can you say rainbow, and then say it again but leave out bow? And, we mustn't stop offering these activities just because people have finished kindergarten. What do poets do?
2. Play with figures of speech, illustrate proverbs, and invent new similes.
3. Find ways to showcase talent.
4. To establish and strengthen connections, read and discuss fairy tales: what are the elements? How are Snow White, Cinderella, and The Wizard of Oz alike? Search for common patterns, for what Henry James called "the figure in the carpet."
5. Teach kids to use Adjust-a-Speak, tailoring their words to fit - variously - peers, authority figures, parents, strangers, teachers, grandparents, younger children, and older kids. We can try using a simple sentence (Will you play with me?) and saying it in different ways depending on the audience. In addition to slang and kidspeak, students deserve to know the language of formality and manners. This doesn't mean we're going to put them in white gloves and set them endlessly in drawing rooms. But, manners need not be restrictive. Manners give a shy person a way to reach out to others.
6. On a poster board, write math process signs and vocabulary in color code. Use green, as in growth, for those indicating increase: +, x, product, sum, total, etc. Use red, as in stop, for those indicating shrinkage: -, /, left over, remaining, etc. Use blue for ratios and equations: =, :, ::, /. Visual cues are strong reminders.
7. Screen for Specific Language Disability, using an individually administered instrument. This can be done by a learning specialist, psychologist, or teacher trained for the purpose. This exercise will pick out those kids whose language is not strong enough to serve them well. We need to screen all children; otherwise, the quiet, friendly, drifty but obedient ones - often little girls - are presumed to be just fine.
8. Teach kids how to use materials backwards and inside out as well as straight on; read the questions before the selection in a reading comprehension passage, read the conclusion and introduction before reading the content of a textbook chapter. Techniques such as these are very helpful to simultaneous processors.
9. Use word segmentation techniques consistently and all the way through the grades. In the 1970's' Bryant and Bradley did a study. They took groups of kids - similar in background and intelligence - entering school for the first time. Throughout the year, Group One sorted picture cards first by initial sound, then final, then middle sounds. Group Two sorted the cards by such categories as toys and vegetables. Group Three didn't work with the cards at all. By the end of fourth grade, Group One was still far ahead of the others in reading. This replicable study, cited often at Orton Dyslexia Society conferences, shows the same results year after year. The exercises

offered in Rosner's book are suitable for kids up through sixth grade and beyond. Kids enjoy them.

10. Teach jokes.

Here are some additional thoughts on the interface of language and technology (tech-knowledge-y).

Last spring I was a panelist on a nationally broadcast radio show. Our topic was how kids could and should harness the miracles of technology. A fellow panelist, a fifth grade teacher from California, said, "I just loaded up my classroom with computers, and turned the kids loose. They're calling kids in other schools, they're accessing CD-ROM, they don't need me, and they're getting everything they want from machines. It's great!"

I cringed. Technology is a great servant but a poor master.

While CD-ROM may be easier for dyslexics to use than a 14-volume encyclopedia, they still have to know what they are looking for and how to use what they find. There are Sunday drivers on the Information Highway just as there are on country lanes.

In talking to parents, teachers, and kids across the country, I hear consistent sets of needs and problems laid out. The points of view mesh, but each group seems to feel it is groping alone, signposts missing, measured miles hidden, and traffic signals dark. Yet the Information Highway beckons. What does this mean for students in general and for dyslexics in particular?

To travel the highway productively, the student needs the following seven elements: First, a manageable vehicle, then a service road from which to survey the scene, next a clover leaf for access, also a magnetic-strip automatic payment card in the windshield for the smart-toll; in addition, bridges to span obstacles, and of course a map…either the old-fashioned kind made out of paper, or the newfangled version on an LED screen on the dashboard showing the point of entry, the destination and landmarks along the way. As wise John White says, "If you don't know where you're going, any road will take you there." Finally, travelers need a plan.

We can use these seven as metaphors for students' mechanical, linguistic, and intellectual Information Highway needs. They pave the way to safe, purposeful travel, avoidance of bottlenecks, collision, or confusion, and they keep kids from slipping through a hole in the Internet. All aboard?

The manageable vehicle, directed by the brain, of course, represents the computer. But we need to remember that it will only be truly manageable if the student knows how to access, store, and record information. A brief training period will usually take care of the first two, but lengthier work is necessary for the third. Students, particularly dyslexics, need to learn efficient keyboarding skills before being turned loose on word processors. Developing "close enough for government work" hunt-and-peck systems is like going into training to groove a limp.

And, in spite of the wonders of spell checkers for polished documents, we need to remember that spelling, grammar, and vocabulary are the vehicles that give users access to one another on the Internet. Jalopies are figures of fun.

Vocabulary is the student's service road. In addition to techno-talk, kids need exposure and practice in each level of the basic progression of language. They need to use exposure to words for the acquisition of vocabulary. They need to acquire and use the raw materials of description, then comparison, and then categorization. Ultimately, they need to be able to think in analogy. Without these competencies, their computer work is simply button pushing. And we can no longer assume that students come to school with a full complement of linguistic basics. Many kids simply have inadequate exposure to language, sparse experience in using words, and limited opportunity to expand verbal skills.

A generous supply of accurate general information provides the cloverleaf. For example, yesterday's paper had an article extolling the wonders of CD-ROM. It told how a viewer could ask for material on Beethoven, then request a few bars of the 5th Symphony, then ask for Beethoven's musical forbears and contemporaries, then explore the musical influence Wagner might have had on Beethoven's music, then see a listing of various conductors who were well-known for their Beethoven interpretations. But, of course, to harness this power, one would need to recognize Liszt, Haydn, Mozart, Bernstein, Mahler and Masur. Without these clover leaves, the names would simply be informational litter.

In moving from the highway section to the next, the traveler goes through tollbooths, which are, in effect, demarcations. They separate and join the various sections into a whole. The six wh comprehension words (who, what, why, when, where, how) are linguistic tollgates. They form an organizational grid for absorbing, sorting, slotting, retrieving, and combining knowledge, ideas, and insights. Each offers a distinct territory, yet each is necessary to the whole.

Bridges are the travelers' spans, over water or rough terrain. An internal time line is a learner's bridge allowing him or her to move backward and forward in time in tracking historical themes, watching evolutions of discoveries, or perhaps comparing literary plot lines from different eras. Many of today's children, who could call off the numbers on their digital watches at age four, appeared to understand that invisible organizer, time. Yet as we see these same kids go through school, we see disturbing evidence of confusion or ignorance. Many can't say with certainty what day is three days after Monday or four days before Friday. Many have little or no sense of elapsing time and are confused and frustrated by such exercises as "Please write for the next fifteen minutes" or "You have two weeks to complete this assignment." Dyslexics, being particularly vulnerable to this difficulty, may need reteaching and strong reinforcement here. A firm grasp on the concept of time is integral to thinking and learning.

To make or read an intellectual map, the traveler must know point of departure, probable routes and landmarks, the general compass direction, and the location of the destination. Metaphorically, this happens when students can sort ideas and information into hierarchical categories: main ideas, supportive fact, and incidental information. Or, as Madeleine L'Engle says: *majah, minah, and mediocah* (major, minor, mediocre). Many dyslexics, often the brightest, see so many implications and so much excitement in all ideas that they have trouble with this type of sorting. They may decide that an idea, a textbook or what they think is the top of the heap, is really bottom of the pile. Students are generally frustrated by this kind of exercise until they have moved from being intellectual collectors to being mental inventory winnowers. This developmental shift cannot be hurried.

To plan and reach a destination, the point of most journeys, even those composed of lazy meanderings, the voyager needs an image, a plan, and the necessary accouterments. Even explorers hoping for Eureka! usually set out with a hunch. Total serendipity is rare.

Humans are unique in their capacity for Executive Function: the ability to initiate a plan, sustain attention and momentum, inhibit distraction, and shift gears when necessary. Executive Function gives structure and the likelihood of success to the process of having an idea, lining up necessities, laying out a schedule, following a procedure, monitoring progress, reaching the goal, and recognizing it as the destination.

In Executive Function, the thinker/planner/learner unites previously mentioned skills and activities into a meaningful whole. All are necessary. To try to use Executive Function without, for example, a reliable timeline or without the six wh words or with a meager vocabulary or sparse general information is a failed quest from the outset. At best, such travelers will be academic voyeurs ambling through Infonosh.

Those children who have internalized the prerequisites for thinking will harness technology to their purposes. Many dyslexics are mechanically intuitive and drawn to little black boxes. Wonderful! But inclination alone is not enough. What else do they need?

They continue to need the same language training, the tried and true organizational aids, and the structured study skills they have always needed. Computer and technology intensify this need; they don't eradicate it. We must give students knowledge, which they can join to modern electronic wonders. Then they will have the "tech-knowledge-y" to power their use and use their power.

5. Emotion: a triple axis and the limbic system

Brains are power plants for learning. They work by firing off and receiving electrical impulses. Their interpretive and innovative energies travel along single pathways, vault across spaces, or work through thick bundles of connections.

For power to produce light, heat, or its other miracles, someone or some force has to move the appropriate switch to the On position. If the switch is Off, the power remains only a potential. Nothing happens.

Emotion functions as that switch, either closing or opening pathways to thinking and learning. Parents and teachers who acknowledge a child's predominant emotional stance can reach into and through the feeling, helping the child channel psychological and intellectual energy effectively. Far from imposing additional burdens, this recognition simplifies the job of parenting or teaching, and gives the child a psychological power boost. Often, a combination of common sense and practical suggestions can clear blocked pathways.

If the limbic system - the part of the brain thought to control and direct emotion - is so important, where do we find it and how does it work? To give ourselves general guidelines, we need to look at a triple-axis model of the organization of the child or adult human brain: left/right, back/front, and bottom/top. We will give more space to the latter, since it is central to the points in the book, and because the information is just now becoming generally available.

Left / Right

We can read in heavy tomes or lightweight magazines about the specialized functions of the left and right hemispheres. The left hemisphere is responsible for verbal, linear, sequenced performance, while the right hemisphere is the source of intuitive, global, spatial understanding. It goes without saying that creativity springs from and abides in both domains. Fascinating as it may seem to tease them apart, a more sophisticated view sees how they operate together, since very few children go off to school in the morning leaving one hemisphere sitting at home on the bureau.

The more we learn about the power of interplay between right and left, the more we see the foolishness and danger in oversimplifying a complex process. Recently, I had a phone call from a mother who was in panic from this piece of cockamamie: "Sarah's teacher just told me my child is completely left-brained. What will become of her?"

Back / Front

In considering the second axis, back/front, we can think of the back as the repository for many and varied kinds of information, and the front as the selector, choosing a course of thought or a plan of action. Jane Homes Bernstein, from Children's Hospital in Boston, used the analogy of the back being like the entire symphony orchestra, and the front being the conductor who tells the musicians whose turn it is to play. The conductor has the whole score, and sees to it that melody, rhythm, and coordination work together to play the piece.

Bottom / Top

Moving from bottom to top, we have what Paul MacLean has called the "Triune Brain." The lowest level, the reptilian brain, contains the brain stem - an extension of the spinal cord, which houses the arousal system. Next comes the limbic system, the emotional brain, which includes the hippocampus, the amygdala, and the hypothalamus. Above the limbic system is the cerebral cortex, which "furnishes us with our most human qualities: our language, our ability to reason, to deal with symbols, and to develop a culture." Because it sits in the middle layer of the bottom/top axis, the limbic system is like a gatekeeper for incoming stimuli, and a dispatcher that sends interpretative messages to higher cortical territories. Here is how the process usually works.

An incoming stimulus first tweaks the arousal system. Arousal sends it up to the limbic system for interpretation, and the limbic system then broadcasts its interpretation of the stimulus up to the cortex.

For example, I may hear the sound of the dishwasher going on, notice it, and understand both the sound and its implications, but it won't rock my emotions one way or another, or unglue my thinking. It will have traveled from arousal to emotion to neocortex, remaining a non-event.

Suppose, however, that my arousal mechanism picks up an unexpected sound. The emotional brain will interpret whether it is something ominous...perhaps a burglar...or whether it is simply a one-time, unfamiliar, sensory experience. If my limbic system decides the sound is threatening - by itself or by implication - it will broadcast a danger message. In response, the metaphoric pathways, doorways, and windows connecting the limbic system with higher level cortical process will constrict, shrivel, or close down, limiting my access to my own memory, reason, and the ability to make novel connections or to create. Thus, my capacities for thinking and learning are seriously compromised.

If, instead, a positive stimulus reaches my arousal system, arousal pops it on up to the limbic system, and my limbic system says, "Yes! This is entertaining, interesting, or great practical use, sexy, funny, or something I can use to 'astonish family and friends'," the limbic system broadcasts a message of purpose and excitement to the higher neocortex. At that point, the number, the breadth, and the depth of connections between stimulus, emotion, and thinking expand, increasing my access to my own experience and ideas, and enhancing my ability to make novel connections, to reason, and to create. Thus, my capacities for thinking and learning are expanded, extended, and enhanced.

At such moments, the left/right axis, the back/front axis, and the bottom/top axis hum with interconnections, putting the child or adult as actively in touch with his or her capacities as is humanly possible. And, in all humans, the interpretive message from the limbic system - the emotional response to a situation or event - overrides other messages just as a public address system overrides an inter-office phone call.

These interpretations are based on memories of past experiences, as well as immediate reactions to present events. Joseph LeDoux, a psychologist from the Center for Neural Science at New York University, said, "The hippocampus, for instance, is involved in recognizing a face and its significance, such as that it's your cousin. The amygdala adds that you really don't like him. It offers emotional reactions form memory, independent of your thoughts of the moment about something."

Thus, since past experiences and memories color children's current learning and schooling, wise parents will consciously work to insure that the majority of their children's experiences load them toward a positive limbic response. The general tenor of daily activity before and after school, as well as what happens in class, fosters the emotional response with which the child will meet the world.

Teachers need to recognize their responsibilities to maintain a positive emotional climate in the classroom through their own demeanor, and through the type and variety of methods and materials they use. They also need to be alert to signals of emotional discomfort, understanding and anticipating the probable consequences in the affected child's learning. "Further, we know that coercion and humiliation are poor incentives to serious learning. An affirmed student learns; a hectored student resists. Such is not only warm sentimentality; it is cool efficiency.

To cite a specific example involving math anxiety, a study by Tanis Bryan of the University of Illinois and James Bryan of Northwestern University documents the correlation of positive mood and math performance. "Overall the results of these studies conducted with children find that positive mood improves the amount and rate of learning. Happiness seems to have a positive effect on children's learning, memory, and social behavior. It is believed that positive mood states induce higher levels of activation and faster and more efficient information-processing strategies, whereas sad moods may cause children to become more withdrawn and inattentive.

If all this is so, how is it germane? What kids should we notice and how might we help them? In the classrooms I work in and visit nationwide, I see kids whose academic abilities fit the normal part of the normal curve, but whose intellectual batteries are drained by social/emotional considerations. Irritants to adults and enigmas to themselves, they do not qualify for the increasingly scarce or over-generalized help available to, say, the learning disabled. Yet, their unarticulated difficulties and unmet needs lower the level of group function, and are barriers to personal fulfillment.

Underacknowledged or misunderstood, these students create problems. Recognized and helped, they could release their productive energies. Some are silent sufferers; others are noisy nuisances. A few are dangerous. All are in need.

6. W.I.R.E.S.: remembering and deciding

This classroom was a soul-shriveler. The teacher welcomed me, saying, "These 4th graders have done so well that we're going to do Tangram puzzles instead of having our regular math class." He stopped. "Everyone, that is, except the people at the table in the corner. They won't be joining in the fun because they still haven't memorized the product of x8. They'll know it by the end of the period, though, because that's the only thing they'll be doing."

"O.K. Let's go. Now…wait a minute…where is it…my tangram book." From the sinners' table came Fred's voice, "It's the blue one in the bookcase, Mr. Brimstone." "Which blue book? There are lots of blue books in that bookcase." "The blue book that's the same color of my grandmother's front door in Nantucket." "When were you in Nantucket?" "When I was four."

Fred remembered the color of the door, the pink geraniums, the shade from the tree falling across the hammock and the grass, the bumpy rides over the cobblestones on the main street, and his favorite flavor of ice cream from the Sweet Shop. "That's just the trouble with you, Fred," said Mr. Brimstone, "you only remember what you feel like remembering."

WRONG. Humans have many different kinds of memory. We may feel brilliant as we recognize a long-lost cousin at forty paces, or ride a bicycle after a lapse of decades. Or we may feel stupid for being unable to retrieve the name of a favorite restaurant, or the product of 7x8. I've read a lot about memory, but I keep forgetting what I've learned.

Now I have a mnemonic device. The Dana Alliance for Brain Initiatives sent a reprint of *Memory: Why You're Losing It and How To Save It* (Fortune magazine, April 17, 1995) which uses WIRES as an acronym for five different types of memory: Working, Implicit, Remote, Episodic, Semantic. I would add two more that underlie and overarch the others: Emotional Memory, and Memory of the Future. How do these different capacities work in life and school? How do others use them to gauge the breadth and depth of our knowledge, the steel of our intelligence or our worth?

Working Memory, located in the prefrontal cortex, is the brain's controller. Working memory collects internal supplies of information, ideas, and associations to deliberate issues or solve problems. Mel Levine says for some bright kids with small working memory capacity, school is like trying to work a jigsaw puzzle on too small a table. Educators need to help by putting an extra leaf in the table: allowing extra time, or reducing rote memory demands. Many dyslexics clutch when they are required to remember and reason simultaneously, particularly under pressure of time. When they are also asked to write about what they are remembering and reasoning, they panic. Anxiety is the enemy of memory. When working memory has enough time and space, thoughts converge and originality soars. **WIRES** hum.

Implicit Memory, located in the cerebellum, lets us ride a bike, drive a car, swim, or turn cartwheels. Although many dyslexics are skillful here, some bright children with visual-spatial or motor confusion have trouble learning to swim, bat, catch, or kick. They don't forget, they never established the implicit memory. **WIRES** don't connect.

Remote Memory, lying in and around the cerebral cortex, stores information: when and what was the Battle of Hastings? Rapid, accurate retrieval from remote memory underlies high performance on some kinds of tests and exams. Some dyslexics, with good ideas and rich associative webs, have clumsy access to this kind of information. Their teachers may write, "Charlie makes wonderful contributions to classroom discussions. If only his test performance could match his daily work, he would reach his potential." **WIRES** short-circuit.

Episodic Memory, created in the hippocampus, helps us remember who came to the birthday party, who told the dirty joke, where people sat at the meeting, or who did what when the broiler caught fire. As we know from the studies of human consciousness, or from Antonio Damasio's *Descarte's Error*, each person's episodic memory of a shared event differs. There is no "official script", no homunculus runs through our minds with a clipboard, recording the performance. Scrolling a scene through episodic memory, we each see it differently, and, unconsciously or unintentionally, our personal memories may shift through time and retelling. Since episodic memory appears effortless, we may mistrust it in school. Witness Fred and the blue front door. **WIRES** carry stories.

Semantic Memory, stored in the angular gyrus, gives us access to word meanings and symbolic associations. To embed such arbitrary symbols as letters and numerals in semantic memory, dyslexics need to soak them in rich personal connotation: multi-sensory teaching. **WIRES** stabilize.

I want to add two others that overarch and underlie **WIRES**.

Emotional Memory, emerging through the limbic system, endows each experience with neutral, positive or negative feelings. These, in turn, form individual emotional habits. Students who have met failure or ridicule in class learn to dread or avoid academic settings; those who acquire strategies for success continue to reach for knowledge. Teachers are in direct control of the emotional climates of their classrooms. **WIRES + E extend**.

Memory of the Future is not an oxymoron. In anticipation, we construct scenarios, and then match our experience to whatever memory of the future we have laid down. People who approach joint experiences with different scenarios get in trouble.

Last week my husband said, "No plans for Saturday night? Let's keep it that way. I'll get a good bottle of wine." At the end of the day, I took a shower, put on my new silk pants, a pretty shirt, and started dinner. My husband appeared in bare feet and shorts saying, "How about eating in front of the TV and watching the golf replay?" I said, "Not on your life." After a slightly strained dinner at the table, he fell asleep in the living room. I considered decapitation, slow poison, or fatal flailing with a pillow. Then I understood. In contrast to his court-and-client workaday, his scenario called for unstructured informality, with closed eyelids on demand. After a week with children in school, my scenario pictured candlelight and urbane conversation. There was no villain. We just hadn't compared notes. Divergent memories of the future spawn misunderstandings among friends, colleagues, spouses, parents and children, administrators and faculty. **WIRES + F foretell**.

What are we supposed to do about all of this? In the olden times, children read, memorized, recited, and regurgitated. . .or at least the lucky ones did. Today education is moving toward cooperative learning and joint problem solving. But in many schools, enlightened teaching does not include equally enlightened testing. Assessment taps Remote memory: the 3Rs of rapid, rote, retrieval.

People combine and recombine their various memory skills constantly, emphasizing those which suit the task at hand. We need to understand our students' memory systems, and tailor our demands according to the kind of learning we are trying to foster. Let the **WIRES** hum with power, connect with one another, carry current, bring illumination.

7. Time: digital disabilities

Take time. On time. In time. Half Time. Do Time. Time out. Time off. Kill time. Mark time.

Spend time. The gift of time. Time will tell. Tell time. Our language is rife with "timely" phrases. And yet, for many young people today, the concept of time is an uncut diamond in the treasure chest of intellect. Unfaceted and unpolished, it lies weighty but useless. Uncut, it is unavailable for brilliance, clarity, etching, or even industrial polishing.

The concept of time gives access to the uniquely human activities of planning, self-governance, negotiation, memory, and anticipation. Little children used to look forward to learning to tell time, and when they did, their parents and teachers applauded an important milestone. Delays in understanding and using the language of time were explicit signals of difficulty with abstract concepts and children so afflicted received extra time and training. Back in the days when recitation was standard school fare, knowing the days of the week, the months and seasons of the year was a rite de passage. Owning one's first watch was more than just delight; it was a badge.

Now, silently as the ticking of a Rolls Royce clock, a new malady has crept up on a generation of school children: D.D. Digital Disability is pilfering precision and comprehension from young minds, which are grasping for order. While this is true of a wide band of children, the effects are most devastating on dyslexics who are already vulnerable to confusion in both temporal and spatial organization.

Where does D.D. come from? Why does it matter? What's to do? D.D.'s roots lie in benevolence gone awry; generosity, technology, and a national habit of haste. Kids want, expect, and receive at earlier and earlier ages items which used to be reserved for major birthdays. Digital watches can now be had for peanuts, literally. I just saw a coupon on a nut 'n grain breakfast cereal offering a digital watch for two box tops and a dollar. A Little Mermaid fan of 4 or 5, a Ninja Turtle freak of 6, 7, or 8, or an Olympics hopeful from 9 on up may sport a watch and spout the numbers. But calling off numbers is not the same as knowing what those numbers represent. Digit-bashing old fogey? Perhaps. But here is what I see and hear in classrooms.

Many students do not understand the circular nature of time and its cycles of repetition; days of the week, months in succession, seasons in rotation. They do not feel the internal beat of the linear movement of time; time passed, time passing, time arriving. They do not see the prevalence of 12 as a governing number (months in a year, hours in each half of the day), or 60 as a recording unit (minutes in an hour, seconds in a minute). To many, 8:30 means "after Cosby". So what?

Confusion about time zaps daily living, compromises the intake of listening and reading, and discombobulates the output of speaking and writing. Let's look at them in order.

Daily, people store their experiences and emotions in memory to be available for ready retrieval. This kind of filing system requires orientation of time and space. Space is visible and tangible, but time is an invisible concept, accessible only through language. We know that Specific Language Disability is an alternative term for dyslexia. Is it any wonder, then, that many keenly intelligent dyslexics lack the structure of time? Is it coincidence that many dyslexics excel at those functions classically attributed to right hemisphere function, and that the right hemisphere of the brain has no mechanism, NONE, for the recording of time?

Again, in daily living, at home as well as at school, the small child learns to postpone gratification. He or she waits for the other person to finish speaking, takes a turn, uses and understands such phrases as "you'll be next". Without a clear understanding of time, children don't have access to these tools of negotiation, which are foundations of good social relationships.

In listening and reading, accurate intake requires understanding of sequence, flashback, or fast-forwards, in other words time. Time markers such as "until", "whenever", "unless";"later", "sooner", shift plot line, meaning, and sequence. The listener or reader with a hazy concept of time usually skips them, and is left with bare bones action, confined to the immediate present.

Output, be it speaking, writing, or going to the supermarket, requires a plan. The human being has an innate capacity for executive function: having an idea, figuring out how to put it into action, and then accomplishing it. This simple sounding series depends on being able to understand and harness sequence; first I will..., then I will..., finally I will... Sequence is an expression of time.

See the chaos born of cloudy sequence and convoluted planning. Two arithmetic problems done, a drink of water, two pencils to be sharpened, the essay begun, a word looked up in the dictionary triggers a memory of last summer, oops better feed the dog, where is that assignment pad?, oh yes, by the stereo, is it turned off?, there goes the telephone. Thirty minutes' harvest; 2 arithmetic problems, and four lines of an essay.

Weep for the time-shaky, thoughtful, creative student taking a forty-five minute test. He or she first reads the questions, then gathers in the necessary memory and information, decides what points are most important to make, divides the answer into manageable segments and then tries to remember, reason, reflect and write, while simultaneously monitoring the passage of time, and continually subtracting time used from time available. Disaster! Either a small introductory point gobbles up forty minutes, or, harried and frantic, the writer crams random thoughts into a facsimile of a disorganized shopping list.

As bad or worse is the plight of the time-untrained student given a long-term assignment. Two weeks or six weeks, it doesn't matter. The fundamental problem remains the same: anticipating the end point, establishing the starting point, marking off the intervals into bite size chunks, and proceeding with measure and purpose.

What should we do? Here are five nearly free Rx for D.D.

1. Teach time. Be skeptical of watch-readers. Probe for comprehension.
2. Use precise temporal language: "on Tuesday", "at one o'clock", "twenty minutes after dismissal" instead of "later", "then", "hurry up...we're late". Listen for incorrect or missing verb tenses in spontaneous conversations. Errors here betray temporal confusion.
3. Practice keeping track of elapsing time. "Tell me when you think twenty minutes has gone by".
4. Keep a large calendar at home and at school. Record happenings, annotate events, color code activities.

5. **Be like Mercedes Benz. Their researchers know that the eye interprets the face and hands of an analog clock more quickly than it can a digital display. Have an analog clock constantly visible.**

Time will tell. The understanding of time will tell in clear, precise, polished performance. Murky comprehension will tell in poor executive function and turbulent, chaotic output. Tell time. Cut the diamond. Polish the facets. Release the beauty. Teach time.

8. Executive Function: is ISIS just a deity?

Martha B. Denckla, M.D., uses the acronym ISIS for teaching her postdoctoral students that Executive Function has four components, or foundations:

I. =	Initiate.	Can the student initiate a line of thinking or piece of work?
S. =	Sustain.	Can the student sustain a line of thinking or piece of work?
I. =	Inhibit.	Can the student screen out distractions from the outside, or, perhaps deadlier, distractions from within?
S. =	Shift.	Can the student shift from one line of thinking or work to another?

In schools we spend a great deal of time on the first three, but overlook and underprepare for transitions. As students race through their departmentally compartmentalized days, expected to shift from one lexicon to another with accuracy and speed, many get lost in the literal shovel, losing newly presented information as they race down the hall to be ready for the next class.

We need to build in buffer zones at the end and at the beginning of class for students to: summarize, sort, and file, so they can retrieve, use, and combine. Simply dedicating the last two minutes of class to an exercise asking students to write the answers to the following questions will help: what is the main thing you have learned in this class, what are you confused about, what would you like to know more about? Asking students to review their answers to these questions as the new class session begins will help them bring their information to the foreground of their minds…to their convergence zone!

9. Attention: tension, attention, intention

Yes, ADD/ADHD is overdiagnosed. Yes, it is a buzzword. AND YES! When it is real, it is really real. Here are some issues to bear in mind.

We all live in what Edward M. Hallowell refers to as an ADD-o-genic culture.

Many conditions such as depression, visual or auditory impairment, or language disorders to name a few cause symptoms, which mimic ADD/ADHD. A thoughtful diagnosis eliminating the pretenders is a foundation of treatment.

Responsible treatments rests on four foundations. All of these need to be incorporated.

- Accurate diagnosis with continued monitoring.
- Self acknowledgement and self-acceptance which may require some Psychotherapy.
- Coaching and structure.
- Medication.

Simply to prescribe or pop pills without incorporating the other foundations is irresponsible. Remember, too, that creativity is ADD/ADHD gone right.

Conclusion

So, Hey! Us with the frontal lobes. Educators and parents deserve to be privy to current knowledge about how brains work so we can be educators for brains. As we move forward in this challenging, joyful, and vital task, may we be guided by Maurice Sendak, originator of my favorite rallying cry: "Let the wild rumpus start!" Speaking to the graduating class at Vassar in 1996, he said, "Give us back the belief in the soul-searching mystery of the creative act. Enounce the moneychangers and defy the hype, the sleaze, the deadly cynicism that chokes the hope out of all our lives. I invite you to take the plunge, and when the hard work is done, have safe sex and let the wild rumpus begin!"

Segments and fragments of this article are quarried from Priscilla's Column in the Newsletter of the N.Y. Branch of the International Dyslexia Association (I.D.A.), and from *Emotion: the On/Off Switch for Learning* and *Words Fail Me: How Language Works and What Happens When It Doesn't*, by Priscilla L. Vail, Modern Learning Press, and reproduced here with their kind permission.

CHAPTER THREE

THE CONNECTIONS BETWEEN CLASS SIZE AND STUDENT SUCCESSES

C. M. ACHILLES, PROFESSOR
Educational Leadership
Eastern Michigan University (EMU)
Ypsilanti, Michigan 48197

J. D. FINN, PROFESSOR
The Graduate School
SUNY, Buffalo
Buffalo, NY 14260

Introduction

This paper summarizes class-size research conducted primarily since 1970. Points are presented as thoughts for policy, for use in schools, and for added research. Modest speculation derived from combining the results of various studies is also advanced. The material communicates some of the knowledge derived about class size in early primary grades that has been collected over the years. The wisdom and the will to begin to redirect education policy and practice cannot be communicated. Educators, leaders, and parents must generate the will to use what research shows will improve schooling. Collective wisdom mandates that investing in young people is not only long overdue, it is the duty of people of integrity. Small classes for little kids constitute education's IRA.

Small is Better; Less is More

Energized by the Glass and Smith (1978) and Smith and Glass (1979) meta-analyses and followed by some class-size interest and research in the United States and Canada from about 1978-1982, it's taken approximately 20 years for class size to be taken seriously as a major factor in education, and about 10 years for results of the STAR (Student Teacher Achievement Ratio) education experiment to have relatively wide-spread consideration in American education. The STAR experiment and carefully evaluated implementations of small classes have shown a "class-size effect" that includes a wide range of positive outcomes for students, teachers, parents, and eventually for society. The class-size change causes the new outcomes.

The STAR, Lasting Benefits Study (LBS), Challenge, and STAR Follow-up results have been made widely available in articles, research reports, conference papers, monographs, and ERIC entries. Eventually, STAR findings attracted some attention and received positive critical comments. STAR was a tightly controlled, longitudinal experiment of class size that corrected for many of the weaknesses identified in prior class-size studies. The LBS, Challenge and STAR Follow-up projects extended the STAR experimental work. After his year long review of the STAR studies, Professor Emeritus Frederick Mosteller at Harvard commented that experimental studies like STAR should provide a basis for education policy and for changes in practice (1995).

> ...the Tennessee class size project,... illustrates the kind and magnitude of research needed in the field of education to strengthen schools (p. 113)....it is important that both educators and policy makers have access to its statistical information and understand its implications. (p. 126).

By re-analyzing the K-3 STAR data, Princeton economist and education production-function researcher Professor Alan Krueger (1997, 1998) confirmed the original STAR K-3 findings and extended them in ways to help leaders make policy decisions. Krueger's analysis showed that positive outcomes could be obtained with only small differences in class sizes, in the range of 22-25 students, a class-size range of interest to persons considering large-scale changes such as in California. Krueger added his voice to Mosteller's that STAR was a well-conceived and important study.

Professor Mosteller (1995) and Mosteller, Light, and Sachs (1996) argued that STAR and similar experiments should inform educational policy decisions. Krueger (1997) explained why people should rely heavily on STAR results compared to earlier class-size studies, [or studies of pupil-teacher ratio (PTR) mislabeled as class size studies]. Mixed results of some earlier studies can be explained by reviewing them in light of STAR findings.

> One well-designed experiment should trump a phalanx of poorly controlled, imprecise, observational studies based on uncertain statistical specifications. (Krueger, 1997, p. 27).

There has been some federal interest in class-size adjustments, especially in America's poorest schools, but the President's 1998 proposed class-size initiative ran into roadblocks including: political ideology; criticism from some persons who mistake class size and pupil-teacher ratio (PTR), or who advocate other education changes; and the facilities crisis brought about from a) long-standing facilities neglect, b) increasing enrollments, and c) the move to smaller classes with the mindset that only classrooms in traditional schools will do for small groups of very young students.

> "Now we must make our public elementary and secondary schools the best in the world...and every parent already knows the key, good teachers and small classes. Tonight I propose the first-ever national effort to reduce class size in the early grades...With these teachers, we will reduce class size in the first, second, and third grades to an average of 18 students in a class." (W. Clinton, *State of the Union Address*. 1/27/98; cited in the NY Times, 1/28/98, p. 19A.)

CHAPTER THREE

Some Contentiousness in Using Class-Size Results

Uses and proposed use of STAR findings have generated predictable controversy in the media and professional literature, and among researchers, politicians, and policy people. In truculent tones reminiscent of R. Callahan's (1962) Education and the Cult of Efficiency, some claim that there may be more efficient ways to improve student achievement or that it is expensive to reduce class size. This assault on longitudinal, replicable research is based on little but speculation – Shakespeare might have said "sound and fury" – and questionable logic. How can we understand the "efficiency" of reducing class sizes until there are enough small-class activities for the serious study of them? Most dire cost predications about the burden of small classes do not factor in cost savings, long-term benefits, or systemic changes that small classes precipitate. (See Table 1)

Class Size: Pervasive and Persuasive

Has any research shown harmful effects of small classes, or that larger classes are better for children? What successful education projects or interventions do not rely on a small-class effect? How much success of some popular projects might be attributed to a small-class effect if the evaluations took class size into account as a separate variable? Tutoring and cooperative learning are class-size efforts. Alternatives to regular public education thrive upon a small-class effect: home schooling, alternative schools, charter schools, expensive private schools, apprenticeships.

The anti-class-size literature offers hypothetical discussions of how something else (we're not quite sure what that is) might be a better or less expensive way than small classes to get at the same achievement and behavior outcomes. The critics usually neglect student behaviors or affect. Favorite suggestions include spending the funds for technology, for incentives, for staff development, or for more projects.

We're just now beginning to understand the effects of early small-class education on later student behavior (e.g., Bain et al., 1997). The STAR Follow-up Studies show long-term education and social benefits, such as student drop-out, discipline actions, retention in grade, high school courses of study and grades achieved. These results are similar to the long-range outcomes of the Perry Preschool Project (Barnett, 1985, 1995; Weikert, 1989; 1998, etc.).

New policy analysis research might review the "trade-offs" in various class-size implementations, such as options involving space use; social cost/benefit questions associated with the high costs of retention, remediation, special education, student indiscipline, etc. Class-size issues might be connected to space usage (proxemics) and the possibility that crowding little children may contribute to later difficult behavior, such as gangs in schools, or that large classes produce stale air that adds to teacher fatigue and student inattentiveness late in the school day. How does early schooling in small classes extend recent findings of brain research, cognitive psychology, neuroscience, group dynamics and community? Small classes increase student participation in and identification with school (Finn, 1989, 1993, 1998). If this leads to a positive trajectory of success in school and the probability that students will not drop out, does this support Lindsay (1982, 1984) that school participation carries over into young adult participation in society?

Table 1. Checkpoints for True Costs of Reasonable-Sized (e.g. 18:1 or so) Classes in Primary Grades. [Achilles & Price (1999, January). Adapted from "Can your district afford smaller classes?" School Business Affairs, 65 (1), p. 10-16.]

Item	Potential for Cost Saving
A. Grade Retention	A. • Number of students held back decreases • Later drop-out rate decreases
B. Improved Student Behavior in School	B. • Vandalism costs decrease • Required corrective actions, such as Saturday school or detention decrease • Classroom disruptions decrease
C. Remediation and Special Projects	C. • Fewer expensive special projects required • Concentrate on fewer students intensely for shorter duration
D. Early ID of Learning Problems	D. • Special education programs reduced in later years • Programs accurately "targeted" to most needy students • Note possibility of increased costs in K and 1
E. Teacher Morale	E. • Increased attendance • Reduced substitute costs • Reduced "Burn out"
F. Creative Space Use	F. • Transportation-related costs • Flexibility and "found" space • Partnerships with business
G. Community, Parent Involvement, Volunteers	G. • Small classes attract parents and volunteers • Field trips (etc.) are less congested

Class Size and Costs/Teachers, Space, and "Out of the Box"

Some people explain that using small classes is expensive, that there is no space, and that there are no teachers available to teach the new small classes. These are problems, but they are not insurmountable. Consider some actual situations.

Operating at the same per-pupil expenditure as the rest of the district, The Downtown School in Winston-Salem, NC has classes of about 14:1. In Success Starts Small (SSS) two schools in the same system had 24:1 and 14:1 because of re-allocation and use of Title I funding. The use of small classes does not have to be costly, especially if one factors in the benefits of small classes. Examples of these benefits are in Table 1.

Schools currently have educators who are not teaching "regular" classes, and these teachers are part of the PTR and class-size differences. Reallocation of personnel and teaching spaces will help solve the space and personnel problems. Table 2 includes an example of how such re-allocation of personnel may be decided in site-based decisions. (This is an adaptation of the form and process used in one NC school.) Classes in Burke County, NC have been reduced in grades 1-3 at little added expenses per pupil.

Tables 3 and 4 provide summaries of actual school-initiated efforts to reduce class sizes to below 20:1 and to do this without adding much funding to the schools over that amount already used there. If these schools can get small classes by careful use of resources, it should be possible for other schools to do the same.

Finally, because small classes are particularly useful when a student enters school in K or grade 1, the use of small classes should begin in grades K and/or 1, and be added one grade at a time. This process will give leaders time to plan, evaluate early results, and make adjustments as needed during a 3-4 year implementation process.

Table 2. Worksheet: Conversion of Current Staffing Into Options for Class-Size Examples are in ( ).*

Current Staff Allocations	**Positions (n)** **Actual**	 **Desired**
I. Regular Classroom Teachers	(19)	
II. Teacher Aides (Est. 2 per teacher for conversion)	4= (2)	
III. Specialty Persons (e.g.):		
A. Media/Library	(1)	
B. Guidance	(1)	
C. Administration	(1)	
D. Specialists (e.g.):		
1. Language(s)		
2. Phys. Ed.	(.5)	
3. Music/Art	(.5)	
4. Technology	(1)	
5. Etc.		
E. Title I, Etc.	(2)	
F. Exceptional Children		
1. Gifted	(.5)	
2. LD 2	(.5)	
G. Other (Nurse, Coordinator)	(2)	
H. Total Specialty Personnel	(12)	
Total Positions Available for Consideration: (19 + 12)	**(31)**	
IV. Total Enrollment for Consideration:	**(511)**	
V. Lowest Class size for Consideration (511 ÷ 31):	**(16.5)**	
VI. Negotiated Target to Achieve	**(20:1)**	

*Adapted from Steve Hansel, Principal, Draper Elementary School, Rockingham County, NC.

Table 3. Demographic Information about Schools Where Small Classes (18:1 or so) Have Been Implemented at Little Extra Costs.

DEMOGRAPHIC INFO (Estimates)				
School/State	N	GRADES	Free Lunch (%)	Minority (%)
I. Monaview (SC)	600	Pre K - 5	77	45
II. Downtown (NC)	325	Pre K - 5	5	43
III.Oak Hill (NC)	380	K-5	78	53
IV. B. Hoffman (MI)	270	K-5	4	25
V. Hillcrest (NC)	430	K-5	70	48

Table 4. Processes Used At Selected Schools for Class-Size Reduction (CSR) With Little or No Funds Beyond What Was Already Available. (Approximations).

	CLASS SIZES/GRADES, (n) (1997 - 1998) or PRE				CLASS SIZES/GRADES, (n) (1997 - 1998) or POST				How Achieve "Small"
School	K (n)	1 (n)	2 (n)	3 (n)	K (n)	1 (n)	2 (n)	3 (n)	
I. Monaview (SC)	26 (3)	20 (5)	16	21	14(6)	14 (6)	21	21	• Re-allocate Title I
II. Downtown1 (NC)	15 (3)	15 (3)	15 (3)	15 (3)	15 (3)	15 (3)	15 (3)	15 (3)	• STAFFING: Same per-pupil
									expense as rest of district.
III. Oak Hill (NC)	33(1)	28(2)	29(2)	26(2)	14(2)	14(2)	14 (2)	24 (2)	• Use Title I.
									Matched with other
									school using PTR in SSS
									study.
IV. B. Hoffman (MI)	27(2)	27(2)	27(2)	27(2)	AVE=22.2				• Special Ed and Staff
									adjustments
V. Hillcrest (NC)3	26 (2)	26 (2)	26 (2)	26 (2)	23 (3)	15 (5)	15 (5)	15 (5)	• Title I, Staffing decisions,
									local effort

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1. Set up at 1:15, but operates on no more per-pupil funding than district average
2. The small school size and limited number of teachers encourage other changes than just class size. Looping and muti-age classes. By assigning the special education teachers to "classes," the "After" was (instead of 27:1). K(2) half day AM/PM at n=20, 1-2 (4) with n=88, 2-3 (2) with n=44, 3-4 (2) with n=39, 4-5 (1) with n=20, 3-4-5 (1) with n=20 (12 teachers for 270 pupils, or about 22:1
3. Hillcrest was slightly underutilized prior to CSR with about 240 students. After CSR the enrollment is about 430. Spaces were re-allocated and three portables were added.

CHAPTER THREE

What are the implications of small classes for use of space, time, and technology in schooling? For improved school-home relationships? For innovative use of personnel?

As more answers become available about small classes in education, information about the efficiency of small class size should also become available. The STAR-generated class-size research has answered the question about the effectiveness of early small-class interventions. How efficient is it to continue educational conditions (e.g., large classes) that lead to school dropout, grade retention, or "achievement gaps?"

Bloom (1984 a & b) asked educators to seek answers to his "2-sigma problem" and "search for methods of group instruction as effective as one-to-one tutoring." How can educators approximate those learning outcomes in a group setting? Appropriate-sized classes in K-3 are a start. They offer three socially desirable benefits that are expressed American values. Those benefits of Quality, Equality, and Equity provide measurable positive outcomes and one mnemonic for education improvement: Better Education = QE^2.

- Quality. Many indicators, including higher achievement in academics, behavior, citizenship, and development show the quality of small classes.
- Equality. All participants get the same treatment. No group gets more or less than another. Each student gets the same-sized scoop of ice cream.
- Equity. Minority and hard-to-teach youngsters benefit more from small classes than do other youngsters, but all who benefit in a small class benefit in positive ways. (Achilles, Finn, & Bain, 1997-98; Finn & Achilles, 1990; Robinson, 1990; Wenglinsky, 1997, etc.).

Improved Education = QE^2: Small classes offer Quality, Equality, Equity

Class-size Research Squares with Common Sense

One beauty of class-size research is that for once education research results parallel common sense. Teachers know that they can teach better in small classes. Parents consistently ask that their youngsters be put into smaller classes and the parents get really involved at the school when the classes are small. (So parent-involvement problems are ameliorated). Most education projects rely on small classes numbers of youngsters with a single teacher, so small classes for all children provide overall school improvement. Often espoused but seldom employed "individualized" instruction actually becomes possible when a teacher has a manageable number of youngsters, and the teacher can realistically be held accountable for student achievement.

The class-size research raises many questions about early schooling. Besides the PTR-class size difference, educators may need to consider space vs. classrooms, remote or satellite primary-grade centers connected by technology to a home-base school, or re-deployment of some educators. Small classes raise issues of space and crowding, and subsequent student behaviors. Small classes intersect with school size as an important variable. [Small classes mitigate the negative outcomes of big schools. Nye, K. (1991)].

In addition to the stand-alone benefits of small classes, class size and the Effective School Correlates fit well together, and this validating mutual support is reassuring. If the Effective Schools Correlates make sense and have helped improve schooling, it should not be a surprise to find close connections between them and class-size elements.

Teacher Aides: A Policy Conundrum

The research emphasis on class size has overshadowed the teacher aide question that has not yet been fully examined. STAR's in-school experimental design could as easily make STAR an experimental study of teacher-aide effects as a study of class-size effects. Zaharias and Bain, two STAR researchers, compiled Teacher Aides and Student Learning. Lessons from Project STAR (1998) for Educational Research Service. Of the three STAR conditions, the Small class (S) was best, generally followed by the Regular class (R) and then by the Regular class with a full-time instructional aide (RA). This experimental finding may help explain mixed results obtained in Prime Time where a teacher aide could be used to change the student-to-adult ratio in lieu of establishing a second class. (Chase, Mueller, & Walden, 1986; Tillitski et al., 1988). STAR was not the first study to show that aides did not help student outcomes (e.g., Davidson, Beckett & Peddicord, 1994). Achilles et al. (1993) questioned the sub-par performance of the teacher-aide classes in STAR.

Macro-level evidence on teacher-aide effects is contained in the generally poor results obtained by Title I over the years (LeTendre, 1991; Borman & D'Agostino, 1996; Wong & Meyer, 1998). Much of Hanushek's (1998) analysis of the "effects of class size" is an analysis of pupil-teacher ratio (PTR) effects (Tables 3-6, pp. 16-24 are even labeled PTR while proclaiming to provide evidence on class size), and this could include teacher aides, depending on how data are reported. He concluded that class size (sic) [or PTR (really)] has little effect on student outcomes. Besides Prime Time, the Nevada class-size initiative is getting mixed results, where because of space limits, one class-size treatment is two teachers in a class of 30-35 students. The inevitable conclusion from all these results is that class sizes, not teacher aides, influence student outcomes.

The teacher-aide findings present serious policy problems. Many teachers like and rely on teacher aides. Teacher aides often live in the immediate school community and know the community and the people there; the teachers may commute. As demography and education practice change, teacher aides may be important in assisting a teacher with inclusion—the placement of special-needs students in the regular classroom rather than in resource rooms or self-contained settings. Teacher aides may be indispensable in helping with bilingual or English as a Second Language (ESL) and Limited English Proficiency (LEP) students and in helping teachers understand the cultures of students from the community. The efficient and effective use of teacher aides is an area begging for more solid research.

Class Size and Safety

School safety has been illuminated in the harsh glare of some shocking violence, and also vastly overstated. Federal legislation and funding have followed the national goal of achieving safe and drug-free schools. Class size and school size are administratively mutable variables.

Class-size research shows that outcomes associated with small classes (and with small schools) are the foundations of safe schools: improved student behavior and human relations skills; increased participation in schooling and school-sanctioned events; and increased sense of community and family in small classes; and a generally improved school climate where teachers, students, and parents feel less stress than in larger classes and larger schools. Smallness promotes familiarity with and knowledge of individuals that can head off violence before it happens. Although much research connects the use of small classes and schools to positive student behavior, much remains to be done here. The analogy, however, of the use of small classes in successful alternative schools for difficult youth is a powerful guideline.

School-Wide Remedial Projects

Given a class-size effect and the competing costs of remedial projects such as the popular and useful Success for All (SFA), serious analyses should be done to determine what portion of projects can be attributed simply to their use of small classes to get their gains. If projects provide little benefit for their costs over and above what could be gained by school-wide class-size reduction, projects should be held to strict cost-benefit analyses. Perhaps the school-wide initiative should be small classes and projects should target the small number of especially difficult students who need even more direct individual attention than small classes allow. Most remedial projects used in schools today are sold at substantial prices.

Unfortunately, some projects that rely on class-size effects to get their positive results also drive the project-mentality, "pull-out" or "add-on" approach to education. To the extent that these projects use both pull-out and teacher-aide treatments, the class-size effect may have extra hurdles to leap! The class-size research helps address the Miles and Darling-Hammond (1998) concern that "very little research addresses how schools might organize teaching resources more effectively at the school level." (p. 9).

Use RESEARCH! Class Size, Not PTR, Should be a Policy Base

Policy decisions and evaluations of education outcomes need to be made separately for class size and for Pupil Teacher Ratio (PTR). Mingling class size and PTR causes confusion, blunts the positive impact of class size and hides shortcomings associated with PTR.

Hanushek (1998) stated the class size and PTR confusion succinctly: "The discussion until now has focused on pupil-teacher ratios, but pupil-teacher ratios are not the same as class sizes" (p. 12). The hesitation to use small classes and the tortuous approach to understanding the power of small classes have been driven by uncritical acceptance and substitution of PTR results as class-size outcomes over time.

"Class-size reduction" suggests that some rational, research-based class size is in general use. What is the research base upon which present class sizes are built? The current class size research is providing a serious look at what class sizes might be needed to meet the challenges of the changing contexts and demographics of education's clients.

Federal Policy Trends: Small Classes are Good Policy and Good Politics

The federal policy debate about class size may be shifting slightly toward smaller classes. In a 1988 report, Class Size and Public Policy: Politics and Panaceas, the federal policy position was summarized by Tomlinson as:

Evidence to date...does not generally support a policy of limiting class size in order to raise student achievement or to improve the quality of work-life for teachers; nor does it justify small reductions in pupil/teacher ratios or class size in order to enhance student achievement. Research also fails to support school policies designed to lower class size if these do not first specify which pupils will benefit and how and why they will do so. (p. 37) (Note the class-size PTR confusion. CMA).

By 1997, the U.S. Department of Education's report, Building Knowledge for a Nation of Learners, included the statement that "studies...such as reducing class size in the primary grades, have proved to help children get a good start in school" (p. 29). Reducing Class Size: What Do We Know (Pritchard, 1998) included the statement:

> Reducing class size to below 20 students leads to higher student achievement. However, class-size reduction represents a considerable commitment of funds, and its implementation can have a sizable impact on the availability of qualified teachers....There is more than one way to implement class-size reduction, and more than one way to teach in a smaller class. Depending on how it's done, the benefits of class-size reduction will be larger or smaller. (p. 14)

In a 1998 U. S. Department of Education-commissioned report, Class Size and Students At Risk: What is Known? What is Next? (Finn, 1998) concluded that "A clear small-class advantage was found for inner-city, urban, suburban and rural schools; for males and females; and for white and minority students alike" (p. 13), and that there is lots of room for added research to address many lingering issues and questions.

The shift in emphasis on class size by the U. S. Department of Education reflects political agendas of the times. The amount of federal funding for education is minor when compared to local and state support, so efforts to get small classes for young children need to target state and local policy makers more than federal officials. Federal education funding is primarily categorical, directed to specific groups or for narrow purposes. Funding for class-size reduction is general or across-the-board so that all students would benefit. Another approach to using small classes that makes sense when funds are limited would be to target class-size reductions to schools or even to classes that have high densities of students whom smaller classes have been shown to help more. Wenglinsky, (1997) said:

> In other words, fourth graders in smaller-than-average classes are about a half a year ahead of fourth graders in larger-than-average classes (p. 24) . . . The largest effects seem to be for poor students in high-cost areas. (p. 25).

If we've not had really serious discussions on class size issues and implications before, at least let's get serious about a research-driven base for major policy shifts in American education. We have knowledge about one scientifically validated way to improve early schooling for children. Small K-3 classes offer Quality, Equality, and Equity. How to do what research shows should be done is a fair question for enlightened policy discussions, political decisions, educational leadership and new education studies. These positive steps will require a collective national wisdom and a better way. Time is wasting.

> "Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping for a moment and think of it. And then he feels that perhaps there isn't. (p. 1)"
> A. A. Milne, *Winnie The Pooh*.

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CHAPTER FOUR

Student Self-Evaluation: What Research Says and What Practice Shows

CAROL ROLHEISER*
JOHN A. ROSS
Ontario Institute for Studies in Education (OISE)
University of Toronto

Introduction

Teachers today are experimenting with alternatives to traditional tests. Performance assessment, portfolio collections, classroom observation, peer assessment, and self-evaluation are joining the unit test and the final exam in the repertoire of the skillful teacher. Such teachers ensure that an over-reliance on testing does not seriously distort instruction or impede important school improvement efforts. Accordingly, their programs are based on a range of assessment approaches. Teachers who include authentic assessment in their repertoires are driven by a belief that curriculum-assessment experiences should prepare students for life in the real world.

While teacher-made tests and standardized tests give us information about student learning, they do not provide all the information. Alternate forms of assessment can generate that other information. For the last seven years we have been working with teachers at all grade levels to develop alternate forms of authentic student assessment strategies. The research evidence accumulating in our studies, and the data produced by other researchers, make us optimistic about the impact of one form of authentic assessment – self-evaluation – on the learning of students and their teachers.

Self-evaluation is defined as students judging the quality of their work, based on evidence and explicit criteria, for the purpose of doing better work in the future. When we teach students how to assess their own progress, and when they do so against known and challenging quality standards, we find that there is a lot to gain. Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation. Evidence about the positive effect of self-evaluation on student performance is particularly convincing for difficult tasks (Maehr & Stallings, 1972;Arter et al., 1994), especially in academically oriented schools (Hughes et al., 1985) and among high need pupils (Henry, 1994). Perhaps just as important, students like to evaluate their work.

In the following five sections we explore the research and practice related to student self-evaluation. The first two sections will be of particular relevance to academics and other educators who are interested in the research and theory background to self-evaluation. The last three sections will be helpful for those readers with a more practical orientation. Together these sections provide a composite picture of what research says and what practice shows.

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* Corresponding author: Dr. Carol Rolheiser, Associate Dean, Ontario Institute for Studies in Education of the University of Toronto (OISE/UT), 252 Bloor Street West, Toronto, Ontario, M5S 1V6, Canada. crolheiser@oise.utoronto.ca

1. Shifts in conceptions of assessment
2. The theory/theoretical model behind student self-evaluation
3. A Four-Stage Model for teaching student self-evaluation
4. A sample of the 4-Stage Model for self-evaluation...how to involve students step-by-step!
5. Debunking myths: Frequently asked questions about self-evaluation

1. Shifts in Conceptions of Assessment

It is important to understand the broader context of assessment reform and the experiences of teachers who are experimenting or adopting new assessment practices. Four major shifts in conceptions of assessment influence how we consider supporting teachers who are adopting approaches such as student self-evaluation.

First, as part of a broader assessment reform movement, conceptions of good assessment are moving toward direct observation of complex performance rather than brief written tests that correlate with the target aptitudes (Linn, et al., 1991). In these performance assessments, students are observed working with complex tasks (for example, Baron, 1990; Shavelson, et al., 1992) or dealing with real-life problems (Raizen & Kaser, 1989). These instruments are often administered to groups of students because group work represents out-of-school performance better than individual production (Webb, et al., 1995). Such approaches to testing would seem to be ideal for the many classrooms today that focus on collaborative and cooperative approaches to learning.

Second, teachers' responses to alternate assessment have been mixed. Mandated alternate assessment programs produce teacher resistance due to schedule disruption, concerns about consistency, and doubts about the usefulness of the data (Wilson, 1992; Howell, et al., 1993; Maudaus & Kellaghan, 1993; Worthen 1993). Yet, when teachers have the freedom to choose, there is enthusiasm for alternate assessment (Calfee & Perfumo, 1993; Bateson, 1994).

Alternate conceptions of evaluation escalate demands on teachers. Alternate assessment must be transparent (Fredericksen & Collins, 1989), meaning that the criteria for appraisal, the population from which tasks are drawn, the scoring key and interpretive schemes must be visible to students, even when the teachers who devised these procedures have an imperfect grasp of them. Asking teachers to engage students in setting evaluation criteria (Bellanca & Berman, 1994; Garcia & Pearson, 1994) intensifies demands. Authentic assessment standards require precise specification of what will be measured, identification of multiple levels of attainment, and descriptions of opportunities to learn (Linn, 1994). The heightened concern with the moral dimension of evaluation (for example, Wiggins, 1993) requires that teachers support due process and allow students to be assessed at an appropriate level of difficulty, when ready.

Third, making such changes is not easy. Briscoe (1994) found that when beliefs about teaching and the constructivist learning theory implicit in alternate assessment conflicted, conventional test practices returned. In Briscoe's study, conflict centered on one teacher's theory of how assessment influenced learning. The teacher believed that regular monitoring based on unambiguous criteria, such as work completed, stimulated student productivity. For the teacher, the motivational power of assessment resided in the fairness of objective procedures. When he/she tried to use performance assessment, he/she felt that objectivity was lost. The teacher had little confidence in the rules he/she developed for interpreting students responses, believed that given grades favoured students he/she liked, and felt assigning a single grade to all students in a group was unfair. Although the teacher tried to resolve these conflicts, he/she eventually returned to multiple-choice testing. Lorsbach et al., (1992) observed two teachers for whom the purpose of assessment was control of students; tests emphasized knowledge reproduction, and work completion was a heavily weighted grading criterion. Shifting to assessments based on observations and interviews to accommodate experiments with constructivist teaching created conflicts for both teachers. One teacher resolved the conflict by redefining her metaphor of assessment from that of "fair judgment" to providing a "window into a student's mind" (p. 309), thereby reconciling assessment with her new conception of teaching. The other teacher did not resolve the conflict. At the end of the study, the tension between his constructivist approach to teaching and objectivist assessment practices continued. Other researchers have reported teacher misconceptions about specific alternate assessment techniques. Ruiz-Primo & Shavelson (1995) found over inclusion: teachers thought performance assessment was anything that involved manipulation of concrete objects. Oosterhof (1995) found under-inclusion: teachers treated only formal tests as valid assessment procedures and included informal methods like observations and oral feedback only after probing.

Finally, one of the most challenging shifts in conceptions of assessment is related to the changing role of the teacher and the changing educational environment. The context for educators is changing rapidly and dramatically. It is more complex and volatile. Teachers are in an environment of conflicting and ever-increasing demands where the school is expected to meet all these demands. As Hargreaves & Fullan (1998) state, "In times of turbulent social change, redefining one's relationship to the environment is crucial" (p. 4). One of the redefinitions relates to our current capacity to build democratic communities within and beyond our schools. If we value "participation, equality, inclusiveness and social justice," (Hargreaves & Fullan, 1998, p. 13), then our classrooms and schools need to be places where students share leadership and responsibility for learning. Hargreaves & Fullan further suggest that "Involving students and parents in decision-making, teaching and learning decisions, parent conferences and assessment of achievement, extend these democratic principles further" (p.13). In such a shifting context our outcomes for students have sufficiently changed and traditional assessment practices are no longer adequate.

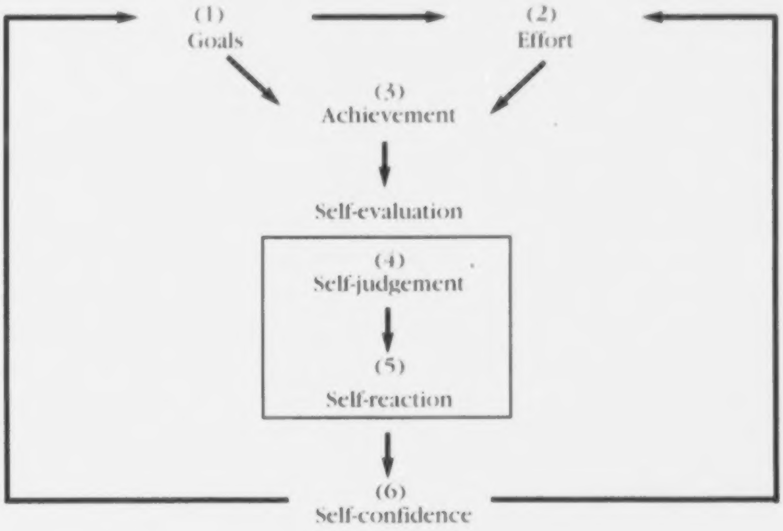
All of these factors place the demand on teachers to develop assessment literacy themselves. We define assessment literacy as the: 1) capacity to examine student data and make sense of it; 2) ability to make changes in teaching and schools derived from those data; and 3) commitment to engaging in external assessment discussions. Developing assessment literacy facilitates teacher confidence about the defensibility of their evaluation practices and reduces feelings of vulnerability. It means that teachers are able to provide the home with clear and detailed assessments, and are able to provide a rationale for the assessment choices they make in their classrooms. Becoming more assessment literate also means teachers becoming critical consumers of externally generated assessment data so that they can engage in the arguments about standards and accountability (Hargreaves & Fullan, 1998). Educators who can clearly and respectfully discuss assessment issues with non-educators and educators alike, will be better able to link student learning and instructional approaches for the purpose of continuous improvement.

Four conceptual shifts have just been elaborated: 1) the movement toward direct observation of complex performance rather than brief written tests; 2) the mixed responses by teachers to alternate assessment; 3) the difficulty in making assessment changes; and 4) the changing role of the teacher and the changing educational environment that necessitates the need for teacher assessment literacy. In our quest to more clearly understand self-evaluation, and in working with teachers to help students get better at self-evaluation, it has been important for us to keep these shifts front and center. In the sections that follow we focus on these shifts in numerous ways, from the elaboration of research findings to the practical strategies that have facilitated the assessment change process for teachers and students alike.

2. The Theory/ Theoretical Model Behind Self-evaluation

In the model that follows we provide the theoretical model for self-evaluation (Rolheiser, 1996). Research indicates that self-evaluation plays a key role in fostering an upward cycle of learning. When students evaluate their performance positively, self-evaluations encourage students to set higher goals (1) and commit more personal resources or effort (2) to them. The combination of goals (1) and effort (2) equals achievement (3). A student's achievement results in self-judgment (4), such as a student contemplating the question, "Were my goals met?" The result of the self-judgment is self-reaction (5), or a student responding to the judgment with the question, "How do I feel about that?"

Goals, effort, achievement, self-judgment, and self-reaction all can combine to impact self-confidence (6) in a positive way. Self-evaluation is really the combination of the self-judgment and self-reaction components of the model, and if we can teach students to do this better we can contribute to an upward cycle of better learning.



But it is not hard to see how a downward cycle could develop if there was a significant gap between students' goals and those of the classroom or if students perceive themselves to be unsuccessful performers. In the downward cycle low self-evaluations lead students to develop negative orientations toward learning, select personal goals that are unrealistic, adopt learning strategies which are ineffective, exert low effort, and make excuses for poor performance.

The problem is that without teacher involvement in student self-evaluation, teachers have no direct knowledge about whether individual students are on an upward or downward path. The choice for teachers is not whether students evaluate their own work (they will regardless of teacher input) but whether teachers will attempt to teach them how to do so effectively. The goals of our ongoing research and the practical model and ideas that follow, are aimed at assisting teachers with this important work.

3. A Four-Stage Model for Teaching Student Self-Evaluation

In one stage of our research we interviewed exemplary users of cooperative learning methods (Ross et al., 1998a). When individual insights were assembled into a composite picture, a generic four-stage procedure emerged for teaching students their role in self-evaluation.

STAGE 1-Involve students in defining the criteria that will be used to judge their performance. Involving students in determining the evaluation criteria initiates a negotiation. Neither imposing school goals nor acquiescing to student preferences is likely to be as successful as creating a shared set that students perceive to be meaningful. Workplace studies, for example, indicate that involving employees in making decisions about their work increases satisfaction and goal commitment. In addition to increasing student commitment to instructional goals, negotiating intentions enables teachers to help students set goals that are specific, immediate, and moderately difficult, characteristics that contribute to greater effort. It also provides an opportunity to influence students' orientations toward learning, a long term guidance effort, that is particularly timely in cooperative learning contexts since students sometimes adopt orientations in group learning (such as letting someone else do all the work) that impede learning.

STAGE 2-Teach students how to apply the criteria to their own work. If students have been involved in a negotiation in Stage 1, the criteria that result will be an integrated set of personal and school goals. Since the goals are not entirely their own, students need to see examples of what they mean in practice. These models or examples help students understand specifically what the criteria mean to them. Teacher modeling is very important, as is providing many numerous examples of what particular categories mean, using language that connects criteria to evidence in the appraisal.

STAGE 3-Give students feedback on their self-evaluations. Students' initial comprehension of the criteria and how to apply them are likely to be imperfect. Teachers need to help students recalibrate their understanding by arranging for students to receive feedback (from the teacher, peers, and themselves) on their attempts to implement the criteria. Having different sources (e.g., peers and teacher) provide data for comparison helps students develop accurate self-evaluations. Discussion regarding differences in data can prove most helpful.

STAGE 4-Help students develop productive goals and action plans. The most difficult part of teaching students how to evaluate their work consists of designing ways to provide support for students as they use self-evaluative data to set new goals and levels of effort. Without teacher help, students may be uncertain whether they have attained their goals. Teachers can also help students connect particular levels of achievement to the learning strategies they adopted and the effort they expended. Finally, teachers can help students develop viable action plans in which feasible goals are operationalized as a set of specific action intentions.

4. A Sample of the 4-Stage Model for Self-Evaluation...how to involve students step-by-step!

The first thing we have found is important in teaching students how to be self-evaluators is to deal with their misconceptions or pre-determined views of self-evaluation (Ross, et al., 1999). We do this up front by defining self-evaluation, and then by generating reasons why this practice might be beneficial. In one of our studies we found that some students confused self-evaluation with peer-evaluation, and were unable to define self-evaluation (even when they had been involved in it). They often described it as "marking yourself". We need to move beyond this definition to help students see the role that criteria play in the judgment of their work.

Younger students might be provided with a simple definition such as: *Self-evaluation is judging the quality of your work.* Over time, however, or with older students we would want to expand this definition to include the following two dimensions: *Self-evaluation is judging the quality of your work, based on evidence and explicit criteria, for the purpose of doing better work.*

Early on in the process we also want to engage students in an activity or discussion that generates why self-evaluation is important. This might be a simple activity such as passing a recording sheet around a group of four in a round-table fashion, with each person contributing an idea regarding why self-evaluation might be important (e.g., "So you have a say in deciding the quality of your work"; "So the teacher will know how much effort you put in"). The ideas could then be collected and posted on a class chart for reference whenever the students engage in self-evaluation.

Next, select a performance or outcome that your students have had some experience in, and take them through the Four-Stage Model. Choosing an outcome with some experiential base is important as it is very difficult to have students generate criteria for an outcome they have had limited or no experience with. For example, if students have had experience with narrative writing, that might be a place to begin.

The following sample takes you through the actual steps of a classroom example based on students' narrative writing, specifically, writing the introduction to a horror story.

Performance/Outcome: Narrative writing - introduction to a horror story

As an effective mental set or beginning to the process the teacher can read the students an opening from one or more horror stories. In groups of three or four the students briefly interview each other or have a discussion. The questions for the interview or discussion might include: "What other horror story have you read that captured your interest...why? What made the introduction so interesting? What made these particular story openings hold your attention?"

STAGE 1-Involve students in defining the criteria that will be used to judge their performance. The specific steps to guide this stage are as follows:

- students brainstorm criteria
- teacher and students negotiate criteria
- use student language to co-develop standards, or a rubric

The teacher brainstorms with the entire class the elements they feel make an effective opening for a written horror story (try to elicit general elements as opposed to specific examples). These elements might include items such as "introduction of a main character or characters", "setting (time and place)", "establishing a mood", etc. The teacher can also feel free to be an active contributor to this list.

From the brainstormed list of elements or criteria have the students rank order them from most important to least. This can be done in a number of ways, including having each small group reach consensus on their three top criteria. The teacher collects each team's list of three and determines what the class consensus is. Again, this is a negotiated process, so it may be that the teacher chooses one criterion, and the class chooses the other two, or whatever the negotiated balance might be. For this particular experience, and to ensure success with the next stages of the model, the class should only focus on the top three or four criteria.

Next, the teacher defines a rubric for the students and shows them different samples to illustrate the concept. The definition will need to be adapted to the grade level, but should communicate the following, *"A set of scoring guidelines for evaluating student work. The rubric or scoring tool contains a set of criteria used to discriminate effectively between performances of different quality"*. For example, the teacher might use the example of the criterion "Action" for regular narrative writing. If one were designing a rubric based on LOW-MIDDLE-HIGH performance, the standards might be as follows:

LOW - slow pace, few scene changes
MIDDLE - moved along, several scene changes
HIGH - fast pace, numerous scene changes

Next, as a class or in small groups (with each group assigned one criterion) the students develop a three-standard rubric (see form below). By starting with three standards for each criterion we increase the chances of initial student success in developing rubrics. As the students gain more experience, the teacher can move to the development of a four-standard rubric. In the process of developing a rubric, the teacher supports the students by providing appropriate rubric language or examples. The students will need to be encouraged to use language that clearly describes each level of performance, and avoids comparative ("better than low") or evaluative language ("excellent, poor"). Finally, it is critical that student language is used in the development of the rubric and that the final rubric with all criteria on it, is shared as a class. Stage 1 might be Lesson #1 in this self-evaluation training sequence. Carrying out the steps of this stage ensure that the criteria for assignments or tasks are negotiated and therefore shared, as well as being understandable since "student language" is used.

Evaluation

Performance/Outcome: ______________________________

Name: ______________________
Date: ______________________

Rated by: • Self • Peer • Teacher • Parent • Other ______

1 2 3 4 5

Criterion:	LOW	MIDDLE	HIGH
1. Rating: ______			
2. Rating: ______			
3. Rating: ______			

GOALS:

SPECIFIC ACTIONS I WILL TAKE …
1.
2.
3.

TOTAL SCORE: ☐

Self-Evaluation--Helping Students Get Better At It! A Teacher's Resource Book
A collaborative product of the CLEAR group © Carol Rolheiser (Ed.) 1996

STAGE 2- Teach students how to apply the criteria to their own work. The specific steps at this stage are as follows:

- show examples
- students practice classifying the examples using the criteria generated

In Stage 2, and perhaps Lesson #2 in the self-evaluation training experience with students, the teacher might provide the students with a written sample opening of a horror story. This stage is like a "trial run"; a chance to try out the rubric before using it on their own work for the purposes of self-evaluation. Have students apply the class rubric developed previously to the sample. The purpose of this activity is to work through their applied understanding of the rubric, and provide evidence from the sample of the judgments made. At this stage the rubric may need to be refined based on class discoveries of what works or what doesn't.

At this stage of the model teachers would now have the students write their own introductions to their horror stories. When completed the students carry out a self-evaluation using the class-developed rubric.

STAGE 3-Give students feedback on their self-evaluations. The specific steps that can guide this stage are:

- provide comparative data
- talk about similarities and differences

After a self-evaluation has been completed, the teacher or a peer apply the same rubric (using an identical form) to the student's opening to a horror story. Either through a face-to-face conference, or sharing written evaluations and comments, there is a discussion of the similarities and/or differences between the student's self-evaluation and the other person's comparative judgment.

STAGE 4-Help students develop productive goals and action plans. The specific steps to guide this stage are as follows:

- students identify strengths/weaknesses based on comparative data
- students generate goals
- teacher guides students to develop specific actions towards their goals
- students goals and action plans are recorded.

Based on the comparative data provided by the self-evaluation and peer or teacher evaluation carried out in Stage 3, the student now records a specific goal (based on strengths/weaknesses) for the next phase in the writing process. Specific actions toward that goal are also recorded (see bottom of previous rubric form). The goal sheets provide a written record and can then be referred to in the future to help students monitor their growth and achievement.

5. Frequently Asked Questions About Self-Evaluation

A. Do students who are taught how to evaluate their work learn better or more poorly than other students?

Three kinds of student benefits have been observed in the studies we and other researchers have conducted. The first is cognitive achievement, especially narrative writing skills (Ross, et al., 2000). Students become better writers by learning how to evaluate their prose. The effects are strongest for the weakest writers. Self-evaluation training helps the low group the most because they are less certain about what constitutes good writing. All students, however, seem to benefit from the focusing effect of joint criteria development and use. The second benefit is in the area of motivation. Students who are taught self-evaluation skills are more likely to persist on difficult tasks, be more confident about their ability, and take greater responsibility for their work. Third, students' attitudes toward evaluation become more positive when they participate in the process. As students grow older they become increasingly cynical about traditional testing. When self-evaluation is included as a contributor to their final grade, students are more likely to report that evaluation is fair and worthwhile. Clearly, there is heightened meaningfulness of self-evaluation over assessment data.

B. Do students self-evaluate fairly?

Many teachers, parents, and students believe that if students have a chance to mark their own work they will take advantage, giving themselves higher scores regardless of the quality of their performance. We have found that students, especially older ones, may do this if left to their own devices. But, when students are taught systematic self-evaluation procedures, the accuracy of their judgment improves. Contrary to the beliefs of many students, parents, and teachers, students' propensity to inflate grades decreases when teachers share assessment responsibility and control (Ross, et al., 2000). When students participate in the identification of the criteria that will be used to judge classroom production and use these criteria to judge their work, they get a better understanding of what is expected. The result is the gap between their judgments and the teacher's is reduced. And, by focusing on evidence, discrepancies between teacher and self-evaluation can be negotiated in a productive way.

C. What kinds of self-evaluation techniques have the greatest chance of increasing student achievement and accuracy of self-appraisal?

Thoughtfully designed self-evaluation procedures that provide students with explicit criteria at an appropriate level of generality, that provide for student involvement in assessment decision-making, that elicit student cognitions about their performance, that ground student goal setting in accurate data, and that are integrated with sensitive instruction may provide teachers with a powerful lever for enhancing student learning.

D. What research or theory-based argument best connects student self-evaluation to achievement gains?

We base our expectations that a self-evaluation assessment system enhances student achievement on four arguments. Students will learn more because (i) self-evaluation will focus student attention on the objectives measured, (ii) the assessment provides teachers with information they would otherwise lack, (iii) students will pay more attention to the assessment, and (iv) student motivation will be enhanced.

Our own research and that of others substantiate these four arguments. For example, it has long been demonstrated that being clear about goals makes a positive contribution to performance (Locke, et al., 1981). Self-evaluation helps focus students' attention on the objectives being measured.

As well, self-evaluation is unique in asking students to reflect on their performance. Conventional test procedures provide no information about students' inner states during task performance, their subsequent interpretations about the quality of their work, and the goals they set in response to feedback. Self-evaluations that elicit information about students' effort, persistence, goals orientations, attributions for success and failure, and beliefs about their competence, give teachers a fuller understanding of why students perform as they do. When incorporated into teachers' deliberative planning they can anticipate impediments to learning, especially motivational obstacles.

As students move through the school system their skepticism about the validity of test scores increases (Paris et al., 1991). Students view self-evaluation more positively than other kinds of assessment. We found that students like self-evaluation because it increased clarity about expectations, was fairer, and gave students feedback that they could use to improve the quality of their work (Ross, et al., 1998b).

Finally, self-evaluation has an indirect effect on achievement through self-efficacy (i.e., beliefs about one's ability to perform actions that lead to desired ends). What is crucial is how a student evaluates a performance. Positive self-evaluations encourage students to set higher goals and commit more personal resources to learning tasks (Bandura, 1997; Schunk, 1995). Negative self-evaluations lead students to embrace goal orientations that conflict with learning, select personal goals that are unrealistic, adopt learning strategies which are ineffective, exert low effort and make excuses for performance (Stipek, et al., 1992). Higher self-efficacy translates into higher achievement (Pajares, 1996).

These four research-based arguments suggest that self-evaluation is a potentially powerful stimulant of achievement.

E. Is simply requiring self-evaluation enough, or do students have to be taught how to evaluate their work accurately?

Students harbor misconceptions about the self-evaluation process (e.g., the role that evidence plays). As a result, self-evaluation is unlikely to have a positive impact on achievement if these misconceptions are not addressed by teaching students how to evaluate their work. Simply requiring self-evaluation is unlikely to have an effect on achievement. Students have to be taught how to evaluate their work accurately and need time to develop the appropriate skills.

F. Are there any benefits for teachers by training students in self-evaluation?

Teaching self-evaluation also has benefits for teachers. Teachers who participate in in-service focused on how to teach self-evaluation grow more confident in their skills as teachers and use a greater variety of assessment techniques in the classroom.

In one of our studies where teachers were involved in action research on student self-evaluation as a mechanism for professional growth, we found that teacher self-efficacy was enhanced (Ross, et al., 1999). Teacher-efficacy is the belief that teachers, individually and collectively, will be able to bring about student learning. There is a generative power of teacher expectations. Teachers who anticipate that they will be successful set higher goals for themselves and their students, are more willing to engage in instructional experiments, persist through obstacles to implementation, and have higher student achievement. The connection between teacher learning and student learning is a critical and essential link.

G. What is the greatest challenge for teachers incorporating self-evaluation into their assessment repertoires?

One of the greatest challenges for teachers is the recalibration of power that occurs when assessment decisions are shared. Data collected in one of our projects (Ross, et al., 1998a) suggested that teachers found it difficult to share control of evaluation decision-making, a responsibility at the core of the teacher's authority. Such difficulty may be due to the fact that teaching students to be self-evaluators involves the implementation of fundamental changes in the relationship between teachers and students in the classroom. Changing root beliefs, behaviors and relationships is difficult and takes time. Accordingly, another challenge is time. Teachers need considerable time to work out how to accommodate an innovation that involves sharing control of a core teacher function with their existing beliefs about teacher and learner roles. As well, students need time to understand what self-evaluation is and how it relates to their learning, in addition to learning how to do it.

Challenges such as these will demand that teachers be patient with the change process, for themselves and for their students.

H. What are some tips for getting students started with self-evaluation?

- Define self-evaluation for students (e.g., "judging the quality of your work").
- Make the benefits of self-evaluation visible to students. Talk about the benefits, and address such benefits consciously, both at the beginning of the process and throughout.
- Overtly confront students' feelings and beliefs about self-evaluation. This means directly dealing with misconceptions.
- Start small. Create lots of small, short self-evaluation opportunities for your students. These experiences may involve daily work with various aspects of the Four-Stage Model.
- Use a variety of quick pre-designed forms to get your students into the practice of self-evaluating during or after regular activities they do in the classroom (see Rolheiser, 1996, for a variety of sample forms).
- Choose a performance that you and your students have had some experience with (e.g., oral presentations, research reports, narrative writing). Try out the entire Four-Stage Model for this performance or outcome (see the elaborated example provided in Section 5 of this chapter).
- Expect a range of reactions from your students as you help them get better at self-evaluation. You will have a continuum of responses, from positive reactions as students see this as "fair" assessment, to negative reactions as students discover that sharing control also means sharing the workload.
- Create collaborative conditions for your own professional learning. Work with a peer or colleague in experimenting with self-evaluation. Such experimentation will enhance personal assessment literacy. The constructive dissonance, social comparison, synthesis, and experimentation that occur when working with others will have a significant effect on your learning, and ultimately, on your students' learning. Collaboration will help you more effectively link student learning and instructional approaches for the purpose of continuous improvement.

- Let all stakeholders (students, parents, administrators, colleagues) know what assortment of assessment practices you are using in your classroom, and practice articulating a rationale for why self-evaluation is an important part of your assessment repertoire.
- Trust that your students can be integral assessment partners, and with time, teaching, and co-learning, that you and your students will become better at it!

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CHAPTER FIVE

Urgent Message: Engaging Parents to Improve Student Achievement

ANNE T. HENDERSON
Education Policy Consultant,
Center for Law Education, Washington, D.C.;
Institute for Education and Social Policy,
New York University

Ever since *A Nation at Risk* was published in 1983, our country has been grappling with serious school reform. At the close of the century, we still have far to go. Beyond any doubt, the research shows that involving parents improves student achievement. Yet few schools engage parents as real partners in school improvement, and district-wide reform efforts rarely take parents seriously. Could there be a connection between the lag in results and the fact that so few parents are involved?

Yes, there is a connection, and concerned parents, educators, and others are trying to do something about it. In 1997, with support from the Danforth and Ewing Marion Kauffman Foundations, over 40 organizations representing educators, school reformers, and families convened to hold a national meeting about advancing school reform. The report from that meeting is called *Urgent Message: Families Crucial to School Reform* (1997)[1]. It describes eight schools in poor neighborhoods that have raised student achievement to high levels by working closely with their families. In these schools, parents sit on governing councils, take part in standards committees, and analyze school data. They also help write school policy, assess student portfolios, and press district and state officials for more resources.

Even the strongest school-reform legislation can't make a difference without parent involvement. The State of Kentucky has a far-reaching school reform law that sets high standards for all students, provides help to schools to carry out those standards, and assesses student progress every year. Yet this law will not work, and students won't learn at high levels, unless families can take part in the ways described in *Urgent Message*.

In far too many schools, especially in diverse and low-income areas, parents not only are not engaged in the schools, they are afraid of the schools. And the schools are afraid of them. In far too many schools, in far too many places, they are not even welcome in the schools. I visited a school in Washington, DC, this summer where, until recently, parents were allowed to come no further than the sidewalk across the street. I've visited many, many schools where the front doors are locked tight, and signs say, "Trespassers will be prosecuted to the full extent of the law."

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[1] Lewis, Anne C. and Anne T. Henderson, *Urgent Message: Families Crucial to School Reform*, Center for Law and Education, Washington, DC, 1997

C H A P T E R   F I V E

What does "public" mean?

These are public schools we are talking about. Public schools. What does that really mean? Does it just mean funded by public money and accountable to officials elected by the community? If that's all it means, then schools that are certified as eligible to receive vouchers would be public schools. I think that our values invest the term public schools with a deeper meaning. In fact, two additional meanings:

The first is inclusive. That means open to all and offering equal access to all. How can schools be public if they are not open to all students and families – the very people for whom they were created. Think about it. Families create both the supply and the demand – the supply of students and the demand that they be educated. And how can schools be truly public if they won't let families in the door, and if they give some students a high quality education but exclude others?

The second meaning is visible. For schools to be truly public, what goes on inside them must be open to view. Public education should be conducted in public. Students work hard. We should be able to see their work and the many ways that they learn. We should be able to see how teachers teach and what they teach, and learn from that. If we let people in, they can see the wonderful things that happen when children are engaged in learning. How can education be public if it takes place behind closed doors, in schools that are the private preserves of the experts who run them?

Isn't this what troubles us about voucher proposals – that the schools would become exclusive and closed? That only some children would get a good education and we would not be able to see what goes on inside?

Yet even without vouchers and charters and tuition tax credits, our public schools are far too exclusive and invisible. Parents stay away, we don't know what's happening inside, and the opportunities for high quality teaching and learning are rationed. And the more they are that way, the less effective they are. The research is very clear about that. Schools that are not open to families and the community and that restrict access to the higher quality classes and programs to those who do well on tests are not good schools. On the average, their achievement is low, their drop-out rates are high, and their reputation in the community is poor.[2]

In fact, that's why there are voucher proposals in the first place, because many parents no longer feel that the public schools belong to them. According to a 1997 Phi Delta Kappan/Gallup poll, about 44 percent of parents approve of letting parents choose a private school at public expense, up from 24 percent three years ago. As David Mathews says in *Is there a Public for the Public Schools?*, "many Americans are halfway out the schoolhouse door."[3]

Reasons for Engaging Families

What does this have to do with engaging parents? Everything. There are three important reasons why parents and family members must be re-engaged in public education.

- Families are the primary public for the schools. When they advocate effectively and forcefully for high quality schools, they get them. And if they don't know how to do that, well, the results are all around us.

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[2] The Education Trust, *Education Watch: The 1996 State and National Data Book*, Washington, DC, 1996

[3] Mathews, David, *Is There a Public for Public Schools?*, Kettering Foundation Press, Dayton, OH, 1996

- Reforms are far more effective and long-lasting if parents are at the table when they are being drawn up. How many reform initiatives have been shot down because the community didn't understand or support them?
- When parents are engaged in their children's education at home and at school, the research shows that children do better in school, and the schools they go to get better.

At the meeting that led to the *Urgent Message* report, we looked at disturbing national data presented by the Education Trust. The National Assessment of Educational Progress results show that the gap between the performance of white students and that of African American and Hispanic students is unacceptably large. Furthermore, after narrowing slowly for many years, in the 1970's and early 1980's, it is beginning again to widen[1]. We also looked at research and data that show that where parent involvement is low, so is the quality of the schools. Consequently the level of achievement is low, too.

This is not rocket science. We know that if we set high standards, prepare teachers to teach to those standards, and actively engage students in learning to those standards, achievement for all students will improve. We also know that if their families are involved in the discussions about what the standards should be, understand how their children will be taught, and reinforce what they are learning, the reforms are far more likely to take hold and succeed.

These three reasons add up to why parent involvement is so valuable, in terms of both student learning and of grassroots support for education.

The Research on Parent Involvement and Student Achievement

Let's take a closer look at the research that connects parent involvement with student achievement. In 1981, I wrote a little book on this research. It was called *The Evidence Grows* and described thirty-five studies, all positive. In 1987, it was updated as *The Evidence Continues to Grow*. Then in 1994, the Center for Law and Education published the third in the series, *A New Generation of Evidence: The Family is Critical to Student Achievement*.[2] This report covers 66 studies that, taken together, make a powerful case:

First, when parents are involved, students do better in school:

- They earn higher grades and test scores.
- They come to school more often, do more homework, and have more positive attitudes and behavior.
- They are less likely to need special services.
- And they are more likely to graduate and go on to higher education.

Second, parents and teachers benefit, too. When schools reach out and engage families, parents have more confidence in the school and in themselves. Teachers have higher expectations of the students whose families they know. Furthermore, parents who become involved are more likely to go back to school themselves, strengthening the educational capacity of the family.

Third, schools get better. Schools that involve families have higher teacher morale, more support from families, and higher student achievement. They also have a better reputation in the community, and they have earned it.

Most interesting, it is the children who are furthest behind and most at risk – and their families – who gain the most. The more the relationship between families and schools approaches a full partnership, the better all children do.

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[1] The Education Trust. *Education Watch: The 1996 State and National Data Book*. Washington, DC, 1996

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What does full partnership mean? It means that parents are involved not just at home, but at school, and in ways that allow real influence on what happens to their children in school. The research highlights four key ways that families should be engaged in children's learning. When schools support family involvement in all four ways, everyone benefits:

- **As teachers:** Creating a home that promotes learning reinforces what is being taught at school and builds the values and skills children need to become responsible adults.
- **As supporters:** Giving their knowledge and skills to the school, such as serving as tutors and coaches, or helping out in the classrooms, library, office or lunchroom.
- **As advocates:** Making sure children get fair treatment and high-level learning opportunities at school, and working to make the system serve all kids better.
- **As decision-makers:** Serving on school councils, committees, planning and management teams, and helping to solve problems of all kinds.

What conditions make these benefits more likely? We know, of course, that what families do at home is very important. If they create a home environment that encourages learning, express high expectations for their children's achievement and future, and become involved in their education at school, from preschool to high school, their children will probably do well.

Yet, in our complex educational system, being involved at home is not enough. Parents must guide their children safely through. That is why parents need to know what is happening at school and how the system works. They also need to be able to work with teachers and school staff if their children fall behind or get in trouble. The reception they get at school is important to how well they can do this. We know that the policies and practices of the school have a major influence over how involved parents will become.[1]

Furthermore, schools' efforts to involve families are most effective when they are:

- **comprehensive** – that means including all families, not just those who step forward;
- **well-planned** – that means having clear goals and expectations, as well as training for both teachers and parents, and
- **long-lasting** – that means a commitment to the long term, not just a series of one-shot events.

In their research, Hoover-Dempsey and Sandler have identified three key attitudes that strongly influence parents' ability and receptiveness to becoming engaged in their children's education. Parents are most likely to become involved if:

- They understand that they should be involved, that it is not only important, but also expected.
- They feel capable of making a contribution.
- And they feel the school and their children want them to be involved[2].

These three feelings, or attitudes, are critical. Parents need to understand that it's important and that they are welcome. They also need to feel valuable and respected. That is why the most effective programs to engage parents build on their strengths. Too many programs see parents and families as negatives – poor, uneducated, little English, possibly abusive, not valuing education – and try to "fix" them. From these programs and schools, parents stay away in droves. Often, the staff say that it's because "these families don't care about their kids" or "they don't value education."

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[1] Henderson, Anne T. and Nancy Berla, *A New Generation of Evidence: The Family is Critical to Student Achievement*. Center for Law and Education, Washington, DC, 1994.

Programs that are effective in engaging families understand that all parents can contribute, and communicate that. They help out with child care and transportation, they treat parents as experts about their children, and they listen to parents' ideas and insights about their children. They also consult parents about how they would like to be involved.

Why does this improve student achievement?

When their families are involved, children adjust better to school. As James Comer says, children learn from people they bond to, people who show they care and will help when children don't understand or fall behind. Children are more likely to trust, then bond to, people who know and respect their families. If children don't bond to school and their teachers by the third grade, they are far more likely to fall behind and drop out.

The same is true of teachers. Teachers are more likely to reach students they know and care about. When teachers get to know families, they have higher expectations for their children. And they like their jobs more. They also have higher expectation of the families. This encourages parents to get more education and learn how the system works. The higher the family's education level, the more likely the children are to do well in school, and the more skills parents have to help their children learn.

Much of this critical equation boils down to attitudes. When parents are involved at school, their children feel more comfortable, especially if the culture of home is different from that at school. This improves children's attitudes toward school. Kids who do well in school feel they have some control over their lives and can make a contribution to their world. They understand that if they work hard, they will learn and do well, and that other people will recognize and respect them. In Jesse Jackson's words, they know they are SOMEBODY.

When families are not encouraged to come to school, and are treated poorly or blamed if they do come, they get the message they are NOBODY. And so do their kids. Kids who feel they'll never get anywhere in life don't work hard in school, especially if they think the school doesn't expect much of them.

What are the barriers?

If this is so important, why isn't it happening? Why do only half the schools in the country even hold parent-teacher conferences? Why does parent involvement in schoolwork drop to 14% by middle school? Why does parent involvement drop sharply as income goes down? What do the major barriers seem to be, and how can they be dealt with effectively? Years of doing workshops with parents, teachers, administrators, and community members, visiting schools, and speaking to parent and community groups have yielded this list of concerns.

Time – At a recent workshop in Council Bluffs, Iowa, school teams

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Dauber, Susan and Joyce Epstein, "Parent Attitudes and Practices of Involvement in Inner-City Elementary and Middle Schools," in *Families and Schools in a Pluralistic Society*, Nancy Chavkin, ed., Statue University of New York Press, Albany, 1993

Hoover-Dempsey, Kathleen and Howard Sandler, "Why Do Parents Become Involved in Their Children's Education?" *Review of Educational Research*, Spring, 1997 composed of principals, teachers, and parents surfaced the lack of time as the #1 concern. People everywhere are under enormous time pressures. Many teachers have families, too. They want to spend time with them. They all said, "No one ever takes anything off our plates. We just have to do more and more." Working with families should not be seen as an add-on; it must become integral to the way the schools conduct their business.

Last year, I was working with a school council in Kentucky. The principal proposed holding class dinners during winter evenings at school. Each teacher would eat with the families in his or her class. After dinner, while the children played games, the parents and teachers would discuss how to work more closely together. A couple of teachers objected. "We work long, hard hours," they protested. "We want to spend our evenings at home."

A parent spoke out. "We work long, hard hours too. We don't have any more time than you do. But we know this will be good for our children, and it's only one evening. We have to eat anyway. Why not eat together and talk about what's so important to all of us?"

Another teacher said, "We'd want to go if our kids' school invited us to a dinner."

The dinners have become an annual event.

Often, the time problem is compounded when teachers feel unprepared to work with families. The burden looms much larger when you're worried about whether you can do the job well. Few states require that teachers receive training in working with families. That can and must be changed.

Language and cultural diversity – As our population has grown and shifted, there are often vast differences between the people who teach in the schools and the families whose children attend them. The staff may be white or African American; the new families may be Latino, Arabic, East Indian, Russian, Vietnamese or Hmong. This is difficult for teachers who don't speak the language or understand the culture. It's even harder if the system doesn't provide much support, such as translation services, interpreters, and training.

Last year, I was in San Diego, on the Pacific Rim, as they like to say out there. At the first school I visited, the principal and the white PTA president said, "We have 29 different language groups in this school. How can we possibly involve those families? They don't understand our system, or even that they should be involved. They never come to school. What can we do?"

At the next school, the principal and a few teachers I was meeting with said, "We have 25 different languages and cultures in this school. Isn't that wonderful? It's a microcosm of the whole world. What a learning opportunity for our kids! We've hired some parents from these communities who speak English to interpret. Some local churches are helping us find people to translate the handbook, newsletter, and report cards. The response has been tremendous. We had 500 parents at the open house last week."

Conflicting expectations – Parents want the most for their children, but they may not agree with the school about what is appropriate, or how to get it. Teachers feel that they are the experts and naturally resent what they see as interference. Schools have to balance the interests of children, parents, teachers, and administrators. In a recent report, *Divided Within, Besieged Without*, Public Agenda found that school systems often feel under attack by families.[1] For their part, families feel stymied when they try to improve things and often settle for some special accommodation for their own child. The basic problem is that

[1] Comer, James P. "Educating Poor Minority Children." *Scientific American*, November 1988

there are often few policies and procedures for parents to be involved in basic decisions that affect their children. This can and must be changed.

Structural inflexibility – Many schools have not structured their schedule or expectations to allow teachers to work with families, or to provide adequate staff development. All sorts of other things get in the way, too. There are union contracts, insurance regulations, custodial agreements, and security procedures. All too often these are cited as absolute reasons why meetings can't be held on weekends, why parents can't come to school when classes are in session, why a tutoring program can't be held after school, and so on. This can and must be changed.

In Pittsburgh, some high schools decided to open classes to parents. Because of busing, many families lived a fair distance from the schools, and the public transportation was poor. When the principals checked with the district to see if parents could ride the school buses with their children, they were told that insurance regulations would not allow that. One principal persisted. Finally, the district office contacted the insurance company. The answer was "No problem." The insurance company research showed that students are better behaved when adults ride the buses.

Lack of community – In many urban areas, teachers rarely live in the school's attendance zone. They are unfamiliar with the neighborhood and don't feel part of the local community. This is almost always the case when communities are very low-income and under severe stress. Yet these are the very places that most need schools that can create community.

In the Logan Square area of Chicago, the Neighborhood Association began to get involved in school improvement. It trained parents who wanted to run for school council. Then in collaboration with parents and staff at Funston Elementary School, it worked to open a community center at the school. The Association helped to raise funds for the center, then approached local service agencies and neighborhood groups about offering childcare, adult literacy classes, and recreational programs. To attract teachers to the neighborhood, the Association also organized a housing coalition. The coalition contacted local lenders about offering teachers affordable terms (like five percent down, and low interest rates) to buy housing in the community. The Board of Education now works with lenders citywide.

All these things together can create a vast division between schools and the community. They don't know each other, they don't know what to expect from each other, and they don't trust each other. This is a prescription for disaster.

Two success stories

How does it work? Here are the stories of Ysleta Elementary School in El Paso, Texas, and Engelhard Elementary School in Louisville, Kentucky. Both are schools in a district context, where policies, resources, training, support and recognition are built into the system of standards-based reform. Both recognize the value of and encourage families and community members to be involved -- providing mechanisms for them to participate in educational improvement, to be at the table when key decisions are being made, and to reap the reward by being a real part of the school their children attend. In both settings there are important community organizations that play an intermediary role.

Engelhard Elementary: Five years ago, Engelhard was in bad shape. The mobility rate was 47 percent, the highest in the state. Near the old Louisville

Public Agenda. *Divided Within, Besieged Without: The Politics of Education in Four American School Districts*. New York, NY: 1993.

downtown, the school takes in students from five homeless shelters as well as from Victorian mansions that have seen better days. Almost 85 percent are low-income, split almost evenly between African American and white families. Fewer than 25 percent of its students could pass the rigorous state test at a barely adequate level.

The school council took on the painful task of carefully looking at achievement data. The planning subcommittee took training to learn how to break the data down and analyze information about student performance. Two things stood out. They were the high mobility rate of all students, and widespread low achievement among African-American boys.

Principal Theresa Jensen and the council felt strongly that the community must be involved in solving these problems. They held many conversations among parents, between parents and teachers, and with students. An African-American father, a member of the planning committee, shared the achievement data with the faculty. In meetings with parents, teachers openly shared the information about their children's low scores. There was no finger-pointing, just frank discussion. Parents felt that African-American boys spend far too much time in school in "time-out," where they don't learn.

"What are we doing that causes these boys to act out so often in school?" teachers asked. A close look at the data showed that children were not mastering basic skills in the primary years. When they got to fourth and fifth grades, they could not do the higher-level work and acted out. A time study showed too little time spent on learning in all grades. Together the school community came up with the solution: extend the school year and completely re-do the Title I program.

Now the school is open 11 months a year. Academic classes are held Tuesday through Friday. On Mondays, which are optional, the school holds assemblies, field trips, enrichment classes and tutoring. Ninety-five percent of the students come. "Having things like field trips and clubs on Mondays lets us focus on academics on the other four days," comments Jensen.

The Title I program was old-fashioned. Children having trouble in reading and math were pulled out of class for remedial instruction and never caught up with their classmates. They also missed out on valuable class time. Teams of teachers met to determine what would work best for their kids. The primary grades (K-3) adopted the Reading Recovery program. The Reading Recovery teacher helps children who are behind, and also coaches teachers on more effective techniques. Children are not held back, but they do spend extra time on reading. When students catch up, they go back to the regular routine. If a child is still behind at the end of third grade, he or she will spend one more year at the primary level before moving up to fourth grade. This way, there are no more fourth graders who can't read.

In grades four and five, students are grouped all together, not in "ability groups." Instead of remedial reading teachers, there is an extra classroom teacher, so class size is smaller. The school also has a full-time science teacher. Classrooms are stocked with math and science manipulatives and computers. And every two teachers share an assistant – all courtesy of Title I. To bring standards into the classroom, the school report card now links students' grades to the state learning goals. This helps parents see and understand the connections to state test scores.

During their many discussions about low achievement, staff asked parents why they weren't coming to school and why so many left the school.

"Because we feel that you only have bad things to say about our kids," they said. "You always talk about what ***we*** need to do different for our kids. You talk down to us and don't take time to listen."

To build better relationships, the staff started a "house calls" program. During the week before the August Open House, all staff, including the principal, make home visits. More than 90 percent of the doors open to them. "The message is that we're here to meet you and listen, on your home turf," says Jensen.

The federal McKinney Act protects the right of homeless children to go to school. Before the act was passed, children couldn't go to their former schools but they couldn't claim a homeless shelter as a residence, either. Now, homeless families can choose a school for their children and keep them there, even after they find housing in another part of town. Engelhard staff told the families in the nearby shelters about their rights. Now they take advantage of the law to keep their children at the school. Mobility is down to 17 percent.

Doing home visits, holding school year-round, keeping school in session on optional Mondays–these practices don't usually find favor with teachers. Teachers' unions are vigilant about working conditions and frown on extra work that does not come with extra pay. Because the teachers were involved deeply in all the planning for change, they were willing to negotiate. Using waiver provisions, the school wrote a memo to amend the Engelhard teachers' contract – teachers will work over a whole year, not for nine months. To win the change, two-thirds of the members at the school must vote yes. The first time, it passed by 73 percent. Because of the high demands on teachers, Jensen asked the teachers to hold a second vote at the end of the first extended school year. It passed by 94 percent.

Ysleta Elementary School: Six years ago, signs around Ysleta School in El Paso told parents, "Wait for your children outside." And parents did so, to the extreme. Only a handful served on the PTA board; most others stayed away. Staff admitted that they wanted to keep parents out of the school.

Ysleta needed all the help it could get. It enrolls some of the poorest families in Texas. Nearly all (98%) are Mexican-American, and 84 percent qualify for free or reduced-price lunch. Many families are immigrants who work in "twin plants" or maquiladoras. Located in Juarez and El Paso, they take low-cost clothing that has been made in Mexico and "finish" it in the United States, paying minimum wages. Huge trucks lumber by on Alameda Avenue, carrying all manner of goods between the U.S. and Mexico.

By 1992, the school was in a crisis. Fewer than 20 percent of students could pass all three sections of the Texas Assessment of Academic Skills (TAAS), earning the school a "low performing" label from the Texas Education Agency. Then, Ysleta applied to the El Paso Interreligious Service Organization (EPISO) for a grant to become an Alliance School. EPISO was mounting a major organizing effort to improve student performance.

By 1997, remarkable changes had taken place. Seventy percent passed the state test in reading, 76 percent in math, and 71 percent in writing. The jump in achievement took place even though many students' families speak little or no English and most are very poor. How did this happen?

Everyone involved understood that the school would not get better unless it worked closely with the community. First, the school invested in a parent coordinator. Then it agreed to place parents on all school improvement committees. It also opened all staff learning to parents. Title I funds were used for school-wide reform. Organizers from EPISO went door-to-door asking families what they thought about the school and recruiting them to become involved. These early efforts revealed that traffic safety was a key concern of the community. Despite heavy traffic around the school, the city did not provide traffic lights and crosswalks.

After a truck hit a child, the parent coordinator helped to circulate a petition. It demanded that the city take action. This sent a powerful signal to parents that the school was on their side. A few weeks later, EPISO held an assembly in the Ysleta gym. Two hundred parents faced their city councilman, the Ysleta School District superintendent, a school board member, and staff from the local police and state Highway Departments. This was followed by monthly accountability sessions. When Ysleta opened for the next school year, the traffic patterns around the school had been totally changed to protect children. The parents and school, working together, had won.

The El Paso Collaborative for Educational Excellence is composed of three area school districts and the University of Texas at El Paso, as well as business leaders and EPISO. It worked to develop new, high standards for teaching and learning. These were introduced in May 1996, after a series of community discussions. At Ysleta, a team of teachers volunteered to develop scoring guidelines to bring standards into the classroom. These were intended both to raise expectations for the quality of student work and to help students improve their performance. The team expanded to include parents and the school's parent educator. The Collaborative provided training and information to the team.

Ysleta's teachers firmly believe their work on higher standards has been the best kind of professional development. The whole team developed scoring guides for different grade levels and subjects. The parent members insisted the language be clear and easy to understand. This way, both parents and students could use them. "If you want us as parents to help our kids, we have to understand, too. If we understand, then our kids will. Then they can explain their ratings to us," said Bertha Ruvalcaba, a parent.

The team began its task by asking, "What is quality?" says Sharon Wiles, a sixth grade teacher. "We looked at our work as teachers, and asked 'Do our lessons lead to high quality work from our students?' First, we checked what the standards say is high quality, and used them to set the top level of the scoring guides. Then we asked our students to develop their own scoring guides, rating their work from the highest level down to the lowest."

Wiles also believes that assessing their own work helps students focus on what is expected of them. "Once they get a handle on it," she says, "they become very critical: is it a 4, 3, 2, or 1? Students write critiques, bullet by bullet, and tutor each other. When students take their work home each week, they explain their scores to parents. This makes it easy for all to understand high standards and why they are so important to better student achievement."

What are the essentials of a successful program?

Develop written policy -- at both the district and school level - Assess the effects of the policy and change it if you need to. What gets measured gets done. This policy should provide for things like the following:

Start early - children whose families understand and foster their development are ready for school. Children who are ready for school make an easy adjustment and tend to do well in school. Develop programs such as Parents As Teachers, Caring Communities, HIPPY, where trained parents from the community visit with new parents and help them deal with their difficulties and learn how to encourage their children's development.

Provide opportunities for parents to learn, too – Family literacy programs such as Even Start strengthen the family. Children spend 70% of their waking hours outside of school, and how they spend that time has a powerful effect on how they do in school. The single most powerful predictor of a child's achievement is the educational level of the mother. This is not a fixed commodity. Parents can learn at any time. And programs that encourage their involvement often result in parents' going back to school themselves.

Make schools centers of community life – Time is a big problem. But if the school library is open, and if the local clinic held regular hours there, and if the gym were available evenings and weekends, and if the classrooms were open, families could get the services and support they need all in one place.

Develop relationships between staff and families – Expectations are everything. We expect very little of people we don't know. The focus should not be on more big events, but on creating many, many conversations and opportunities for exchange. Personal learning plans, family conferences, class meetings, are all effective tools and can be built right into the school structure.

Display student work – Every school should be a showcase for its students' work. The public should be able to see the work that students do. In fact, looking at students' work, and seeing students apply what they are learning, is a wonderful way to educate people about education and the value of high standards.

Provide more time to learn – Lengthen the school day and the school year. Many children are behind. They need more time to learn. They need tutoring after school, and they need to have learning opportunities over the summer. Before *A Nation at Risk*, the average school year was about 170 days. Now it's back to where it was when I was in school, about 180. That's not enough.

Respect the rights of children and families – and use the laws that guarantee those rights. Title I and the Individuals with Disabilities Education Act not only require a high quality education for all children, they provide important funds to make that possible. Use them wisely. They are not job-creation programs; they are for children.

Invest in staff development – the kind of staff development that is driven by the needs of schools and what the people in those schools have identified that they need. The staff development where district bureaucrats decide that everyone must learn about rubrics or cooperative education or total quality management is not as effective.

Recognize teachers and administrators who show leadership in opening up schools to families – Recognize and then reward parents and community members who respond and who persuade others to follow them.

Finally, build broad public engagement – Hold public sessions where people can air their concerns and give their ideas. And don't hold them at the district offices. Go into the neighborhoods, the public housing projects, the churches, the parks, and the laundromats.

A special partnership

How can we help parents and family members become involved in these ways? In Kentucky, the state PTA and the Prichard Committee for Academic Excellence have become partners. Together, they have created the Commonwealth Institute for Parent Leadership (CIPL), which will train 200 parents a year across the state. Already 300 parents have completed the program. To become CIPL fellows, parents must commit to attending three 2-day training sessions, offered in different regions of the state. They also agree to design and carry out a project in their local community.

There are high standards for these parent projects. Each project must be designed to do three things: improve student achievement, involve more parents, and have a lasting impact. To help participants, CIPL developed a scoring guide for partnership projects. CIPL hopes the standards can serve as guidelines for those promoting parent involvement in other states.

How do the project standards work?

1. *Will the project improve student achievement?* Projects should try to improve conditions that lead to low grades and test scores. This should raise achievement to a higher level. Why write a school handbook if more than half the kids in the school are reading at the lowest level? Each project must address these questions:
   - *Is the project based on real data or information* about student achievement in your school or district? Does it meet a real need? How do you know?
   - *Does the project aim to improve the quality of student work?* Will you and others be looking at student work to see if the project has an impact? How will you do this? What impact will this have?
   - *Does the project refer to high academic standards?* How will it promote understanding of higher standards in the school community? How will it help parents, teachers, and students tell if students are working at a high level?
   - *Why will the project improve student achievement?* Is the link between the project activities and improved student achievement clear and direct? How will it improve student learning? Why do you think so?
2. *Will the project increase parent involvement?* It's important to go beyond the parents who are always involved. Questions like these must be addressed:
   - *Will you engage all types of parents in the school community?* Will you be working with parents who are not involved? Are there parents who will not be reached by the project? Why? Who are they?
   - *Will at least one-third of the families in the school be involved?* Will you be involving the parents who can have an impact on the problem your project is addressing?
   - *How will you reach out to the families you want to include?* Do you think your approach will work? Why?
3. *Will the project have a lasting impact?* Often, projects tend to be one-time events, such as an open house, a reading night, a family fun fair, a science exhibit. What kind of effect do you want to have? Consider these questions:
   - *Will the project activities extend at least two years?* If not, will they have an impact that will last after the activities are done?

- *If your project is an event, will it happen at least three times during the school year?* Will there be activities between the events? Will key people in the school community be involved (e.g. the PTA, custodial staff, principal, student group, school council)? Will it help other activities or events in the school be more successful?
- *Will the project become part of standard practice in the school?* Could the school easily adopt it? Will it be part of the school improvement plan?

Scoring parent partnership projects

To help parents, family members, and community people think about these questions, we have developed a scoring guide (see box). It is based on the four levels of performance used in Kentucky: novice (beginner), apprentice (starting to learn), proficient (learning well), and distinguished (at the highest level).

First, think about a project that is already underway. Bring a few people together to talk about how it's going. Place a check by the statements in the scoring guide that you think best answer the questions in the first column. Where do most of the checks fall? To be proficient or distinguished, all but one or two checks should fall in those columns. This scoring process should result in an interesting discussion.

Now think about a project being planned. Which statements best describe how the project is designed? Use the statements in the guide as tips for increasing the project's impact. Almost any project can have a positive effect on how well our kids do in school, if it pays attention to these three standards. What could be more important?

Scoring Guide for Parent Partnerships

Standard	Distinguished	Proficient	Apprentice	Novice
1. Is the Project Focused on Improving Student Achievement?	• Project is based on at least three sources of data or information (e.g. state test scores, school improvement plan, school survey) • Parents, teachers and students will look at a wide range of student work • People will understand how standards are used in the classroom and whether student work meets standards • Has a clear, direct link to improving student achievement.	• Project is based on at least two sources of information or data • Some parents and teachers will look at student work in one-two subjects in a few grades • Project will show how standards are reflected in student work • The design may have an impact on student achievement	• Project is based on some information, but not very thorough • Looking at student work is not a main feature of the project • The link to standards is not clear • The case for how project will improve student achievement is vague and/or indirect	• Project is based on scanty or vague information • Looking at student work is not a priority • Project does not refer to standards • Link to higher student achievement is not convincing
2. Is the Project Designed to Involve More Parents?	• All types of families in the community will be reached • Project will engage at least 1/3 of school families • Families most in need are main target • Designed to reach families not now involved	• Many families in school community will be reached • Project will have some personal contact with about 1/3 of families • Families most in need are part of target group. • Outreach strategy will work with most families	• Some families not now involved will be reached • Project will get information to some families • No special effort to reach families most in need • Outreach strategies are traditional (flyers, newsletter)	• Project will involve only the usual suspects • Information is hit- or-miss • Families most in need not part of strategy • No outreach
3. Will the Project Have a Lasting Impact. Anne T. Henderson, Institute for Education and Social Policy, 1999	Activities will extend at least two years • Events will happen at least three times during school year, with activities in between. All key players involved • Project will be adopted by school. There is a plan for making that happen	• Some activities will last two years • Events will happen three times during first school year. Some key players involved • Project will probably be accepted by the school	• Activities will last only one year • One or two events, with some activity between. Only a few people are responsible • Not clear that school is interested in continuing the project	• One-time event, during one school year • Project very dependent on one or two people • School leaders not interested in project

CHAPTER SIX

FROM ORACY TO LITERACY: HELPING CHILDREN ATTAIN ACADEMIC SUCCESS

KATHARINE G. BUTLER, PH. D
Research Professor, Syracuse University, Syracuse, NY
& Director, Center for Educational Research on Dyslexia
San Jose State University, San Jose, CA

Introduction: Looking at Language

Language specialists have come to appreciate the importance of early intervention when children experience difficulties in the learning of language prior to school entry. They know that children cannot master the language of learning following school entry if their spoken language is insufficient to permit them to master the tasks involved in learning to read. For many years educators were unaware that children at-risk or experiencing difficulty in listening and speaking in the preschool years might well be prone to reading and/or writing problems later in their school life.

How early should "Early Intervention" begin? In the past, "early intervention" was seen as beginning in kindergarten, or perhaps, in preschool. Now multiple strands of research have shown us that, for early intervention to be most successful, it must begin very early on, in fact, the earliest years of a child's life is none too soon!!

For most children, spoken language appears well before reading and writing. It is the ability to listen and to speak that serves as a precursor to written and reading language. Children's place on the oracy to literacy continuum is at least partially determined during the first years of life. Only if children can move successfully from oral language to written language will they be able to master the language of teachers and texts. Teachers spend much of their day talking to and with children, assisting them in learning to learn the curriculum. Their primary tool for teaching is language, spoken and written.

Language: Part 1. Vocabulary/Semantics

As Lois Bloom (1995) has pointed out, "Anyone who cares about children has every reason to care about how they learn language [and] early language learning is built around one central aspect of that learning: the words of the language. Virtually all children begin to acquire a vocabulary of words in the second year of life, usually soon after the first birthday." (p.ix)

Bloom goes on to comment upon the longitudinal research of Hart & Risley (1995) indicating that young children (birth to three) at home need to have many experiences with words in interactions with others. Hart and Risley's research has alerted us once more to the demonstrated need for parents to talk to their children! They point out that parents need (1) to provide verbal approval as well as prohibition; (2) to provide verbal feedback to their children's utterances; (3) to talk about things by using sentences stressing the past, the present, and the future; (4) to give children verbal choices using questions or imperatives, and (5) to listen as well as to respond to what their children say. Hart and Risley also point out that "Vocabulary use indicates how many different things, actions, and relations a child talks about from day to day (p. 143)." Being able to talk about many different things helps children to enlarge their vocabularies, and that, it turns out, is a critical factor in increasing later language performance in school. They followed the children until the age of 3, measuring their language status. They saw remarkable "dampening effects on development when relatively more of the children's interactions began with a parent-initiated imperative ('Don't,' 'Stop,' 'Quit') (p. 143)." Such prohibitions resulted in the children becoming less interested in speaking and listening.

As we know from other research, parents who teach their preschoolers to understand the "language of the schools" increase their children's ability to function in the context of the schools, due in large measure to the familiarity of school and text "talk". Indeed, early reading and writing encourage children to become linguists (Wallach & Butler, 1994). Such youngsters learn about speech-to-print differences and how to talk about language and to analyze it. In fact, "beginning reading is the time when the implicit becomes explicit and the linguistic becomes metalinguistic" (Wallach, 1990, pp. 65-66). In fact, Wallach refers to beginning reading as the time when children begin to gain the skills necessary to "talk and write like books."

It is only when children understand the language of texts and of teacher-talk that they will achieve academic success. And only if they achieve academic success will the positions most highly valued in the high tech world of 2000 and beyond become available to them.

Literacy is the prime requirement, as Lyon (1999) points out:

> A massive effort must be undertaken to inform parents and caretakers of the importance of providing oral language and literacy experiences from the first days of life-to engage children in playing with language through nursery rhymes, storybooks, and as they mature, early writing activities. Parents and caretakers must become intimately aware of the importance of vocabulary development and must interact verbally with their children to enhance verbal reasoning, semantic, and syntactical abilities (p. 5).

Lyon's many reports on the efforts of researchers in the area of reading development, reading disorders and reading instruction have galvanized educators and other school personnel to consider the importance of such statements as the following: "Strong comprehension abilities are clearly related to oral language comprehension, which like reading comprehension is also critically dependent on the acquisition of a robust oral vocabulary (Lyon, 1999, p. 3)."

Another term for oral vocabulary is *semantics*. Semantics deals not only with vocabulary development, but also with the roles that words can play when combined with one another (Weiss, Tomblin & Robin, 1994). When children are referred for a speech-language evaluation, oral vocabulary is frequently measured both in single-word contexts and in spoken language, i.e., discourse. Measuring single-word understanding and production followed by engaging children in the wider arena of conversations or discussions mimics the measurement of reading, wherein the tester wishes to know if the child comprehends vocabulary specific to her/his grade placement, followed by asking the child to read connected written discourse fluently, that is, at the level of conversational discourse. An example follows:

The case of Burt

Burt, a shy and quiet boy, was retained in kindergarten, but this year he is in a transitional first grade. The tester has administered the PPVT-R, with little success. He moves on to ask Burt to provide word meanings:

T: What's a bicycle?
B: Ride.
T: That's what you do with a bicycle. Tell me more.
B: Fall down.
T: That's what may happen to you. Tell me about bicycle.
B: Mash up.

Turning from the lexical task above, the tester moves to the discourse level.

T: Okay, Burt, tell me about birthday parties.
B: Sing happy birthday, blow away candles, eat a birthday cake, open your presents.
T: Very good. Now listen to this story and then say it back to me. Tell me the whole story! One day, a little boy went to school. He went up the steps of the school and opened the door. The boy went into his classroom and started playing with his friends. The teacher said, "Time to come to circle." The boy put away his toys and sat down on the rug.
B: A teacher a boy played with a teacher's toys time for us to come to circle and it the end.

The tester concludes, as perhaps the reader has, that Burt's performance in narrative discourse (the telling of a story) is well below that of other children in the first grade classroom. The tester may have also recognized that the birthday party discourse indicates that when Burt has actually experienced an event repeatedly, he is able to provide a 4-item event cast. However, in attempting to repeat the tester's story, even though Burt participated each day in the teacher asking him and classmates to come to circle, his retrieval of events was much less successful.

Words are hard work for Burt, singly or in multiple. It is more than time to intervene!

There is recent and convincing evidence that phonological processing,

Language. Part 2: Phonological Processing/ Awareness.

and more specifically, phonological awareness (the awareness that speech sounds, called phonemes, can be identified in syllables and words) is a necessary skill that must be mastered when learning to read.There are about 44 English-language phonemes but only 26 letters, a circumstance that leads to difficulty at times. Children must recognize how the letters of the alphabet and the speech sounds are related. This relationship is known as the alphabetic principle, and as Wallach pointed out earlier, children must develop metalinguistic skills in order to understand letter/sound correspondence, also called sound/symbol correspondence. Children evidence emerging literacy skills when they say things like "See my back back there. See my back back there.That means different things!" or "William is a long name (van Kleeck, 1994, p. 61)."

For those children who do not chance upon the alphabetic principle intuitively, specific instruction may be required. In addition, early instruction in phonological awareness may well provide the necessary underpinnings for reading, and by inference, for writing.

NICHD data (Lyon, 1999) indicates that at least 17%-20% of the nation's population displays a reading disability, and that "at least 10 million children, or 1 child in 5 will experience significant difficulties learning to read well enough to utilize reading to learn and for enjoyment (p.3)." Certainly, those children with limited understanding of sound-letter correspondence due to poor phonological processing may be expected to be at significant risk for reading failure.

It is important to note that phonological awareness is not just another name for phonics, although many professionals and parents may make that assumption. There are significant differences and approaches when teaching children to become aware of phonemes (speech sounds) as salient bits of acoustic data and teaching them about letters and the sounds assigned to those letters.

Young children try to write what they hear, and their initial literacy efforts may reflect their confusion. Adults can also "come a cropper" possibly because letter recognition has replaced sound recognition. In visiting a first grade classroom, this author observed that the teacher had put words that began with the letter "s" on the chalkboard. She then pointed to each word on the board and asked the children as a group to "say it aloud." Things went well when the words were /sleep, /stop/, /smile, and /soap/, but the next word was "sugar."

A victim of adulthood, the teacher said "Shugar" while pointing to /sugar/. The children, who had been listening intently, said "No, No!!." The teacher, concentrating on the letters in the word, again said "Shugar. Shugar starts with an s. See?" She remained adamant, unable to unglue herself from the written, rather than the spoken, word, a victim of *phonological unawareness*.

Definitions of Phonological Awareness

Blachman (1997) describes "phonological awareness [as] an awareness of the phonological segments in speech, the segments of speech that are more or less represented in an alphabetic orthography (p. 409)." Liberman (1998) describes phonological awareness as "a conscious understanding that words come apart into consonants and vowels (p. 5)." He adds that "phonological awareness is not a normal by-product of learning to speak, [and] lay[s] bare the critical difference between speech and reading/writing (p. 5.)." He maintains that speech is much easier than reading and writing, which is indeed true for many children. Catts and Kamhi (1999) concur, stating that "phonological awareness is the explicit awareness of, or sensitivity to, the sound structure of speech. It is one's ability to attend to, reflect on, or manipulate the speech sounds in words (p. 111)." Readers will note the similarity among the many definitions of phonological awareness and its role in listening, speaking, reading and writing.

However, as teachers, speech-language clinicians, and other school personnel know, there are a goodly percentage of young children who, in the preschool and in early elementary school grades, may find spoken language to be anything but easy. In addition, although while these children's spoken language may improve with assistance, when encountering beginning reading, writing and spelling, such children may again experience difficulty. This time, the phonological processing problems may appear in a different guise (Butler, 1986). The spoken problem of their preschool years goes "underground" and reappears in reading, writing and spelling. Alvin, however, represents a group of children whose processing problems remain clearly in view.

The case of Alvin

Alvin, a six-year-old, is in kindergarten and is having difficulty with sounds and sound combinations in words and sentences. Alvin substitutes and omits a number of sounds, and tends to provide brief responses to teacher-initiated questions:

T: I'd like you to tell me about some words. Here's something that you may have for breakfast. Orange juice. What's orange juice?
A: I doh noh.
T: See if you can guess. What color is orange juice?
A: Ahnge, an yu dink i -.
T: That's good. Tell me some more about orange juice.
A: Doh noh.
T: Let's try another. What's sugar? Tell me what sugar is.
A: Yukky.
T: Yukky? Why?
A: Cah i- wahtuns yer tee_ ('Cause it rottens your teeth).
T: Tell me about visitors. Do you have visitors at your house?
A: (showing great emotion) My Dod; duh koo nurtz kaim tuh our hout fer no goo readon. (My God, the school nurse came to our house for no good reason!)

Alvin's speech and language has always been difficult to understand, and his parents have expressed the hope that learning to read will help him. The teacher is considering referral to Special Education. School personnel agree that Alvin's status on the oracy to literacy continuum is, at best, problematic.

Language. Part 3 Morphology and Syntax

Children who display difficulty in the morphological realm exhibit difficulty in either understanding or producing morphological inflections, e.g., the ability to add s to change a word from singular to plural, to include 's to make a word a possessive, to add *ed* to change the tense of a word from present to past. Jamie is seven. Note his morphological problems as he recounts a story, after some urging by his teacher:

The case of Jamie

T: Jamie, can you tell me a story?

J: I can't think of none.

T: (providing a story stem) What if the story began, One night I walked into a dark haunted house and...

J: I met a ghost. He wanted to kill me. But he couldn't. I ran very, very fastest. And all of a sudden I saw a coffin. I hides in there. And all of a sudden there a ghostes inside there. And I sent out of the coffin. And then there weres a guy named Count. And then he tried to suck my blood. And then he couldn't find me because I hided. And then I met a mummy. And then he wanted to tie me up and and that's all.

Jamie's story reflects not only morphological difficulties, but problems with syntax as well. Syntax, another area of importance, refers to sentence structure. There are many aspects of syntax, making it time-consuming and difficult to assess. Language specialists often collect a large conversational sample of language in order to establish whether or not a disorder of syntax exists. Syntactical problems are revealed not only in spoken language, but may also appear in the student's written expression:

The case of Pauline

Pauline is almost 16 years old (15:8) and is enrolled in 10th grade. She has had intermittent services for a speech-language disorder since first grade. The Wide Range Achievement Test-Revised indicates that her reading is at the 1st % (Grade 3), her spelling is at the 2nd % (Grade 3), and her arithmetic is at the 2nd % (Grade 5). The Woodcock Reading Mastery Test shows Word Attack skills to be at Grade 3, but her Word Comprehension is at the 9th grade, a notable difference.

Her English teacher asked her to tell a story. Pauline's response follows:

> This, uh, can't think of a first name. I always up a name. This kid ran away from home. Uh, he wound up in this forest. And during the night he, uh, upped and he started walking around, and, uh, saw this, like door just in a field and he walked through it. He starting walking up this path; you know, once he got through there was this path. And he startin' to walk it up and he saw a house. He went into it. And, uh, I alway make up different endings. Asks him to do something. He goes to this castle. It has mirrors, a dragon, lights. He wouldn't getted back home. He'd just stay there inside the place a couple days. He would go back down, then that's it.

Pauline's written work reveals almost identical errors in the written realm, and her spelling scores are among the lowest in her class. The English teacher is now considering recommending a resource room placement.

Pragmatics, the last of the known subsystems of language, involves the use

Language. Part 4
Pragmatics

of language in a social context. At times this use may be considered to be metapragmatic, meaning that the comments made by the child indicate that socially acceptable behavior has been recognized and is made explicit. For example, the child in a school discussion who says, "You're not supposed to interrupt," or "Let her finish talking" (van Kleeck, 1994, p. 56) is very much aware of the social use of language, as well as the teacher's behavioral requirements in the classroom. Other children may not recognize that their language is not socially appropriate, may be difficult to follow, or may not be sequential, i.e., story events may not be in the expected order.

The case of Christine

Christine, age 10, is a language learning-disabled child who suffered brain damage in her preschool years. The following excerpts are in response to the teacher's request to tell the story of Little Red Riding Hood, a story which had been read repeatedly to the class.

C: Once upon the time, pretend like once upon the time, a little squirrel talked to Cinderella. Cinderella? Okay, pretend like right here, a sheep, and right here, a duck. And pretend like right here a wolf and that a man working that cuts trees. Pretend like right here a bad wolf (remainder of sentence is unintelligible). Mom want me to catch Cinderella and gramma.

T: Is she going to Grandma's house?

C: Thataway, bye-bye. Okay? Knock, knock, who's there? What have, what big eyes she got, the better to eat she. Okay. What okay? Pretend ...like...world...no, pretend like here. That bad wolf and Cinderella, Cinderella meet the man, take Cinderella out and put rock in it. Oh, honey, I love she. Let's get married. No, no. She see that wolf run and come back here. Okay, okay. She had tea and tea for ever and ever.

Christine's story took over 30 minutes to tell. Much of it is not quoted here. The teacher continued to try to have Christine return to Little Red Riding Hood, but was never able to have Christine de-conflate the stories of Cinderella and Little Red Riding Hood. (Readers will note that Christine begins her story with "Once upon the time, and ends with "tea forever and ever." Thus, there is a beginning and an end to the story, which is woefully out-of-kilter. Certainly, Christine's place on the oracy to literacy continuum is problematic at best. Other groups of language disordered children also have difficulties with pragmatics; a group that is increasingly in evidence is young children who are believed to be autistic or autistic-like. Let us now observe a child who represents a fortunate group of children who have little or no language problems:

The case of Lilly

Lilly, a two year-old going on three, and an only child, enters a restaurant with her parents and their friends. They are seated at a table in an alcove, and the waitress distributes menus and a wine list to the adults. Lilly climbs into a child's seat with great agility and settles herself. The adults give their orders to the waitress and Lilly's mother also provides an order for Lilly. The waitress collects the menus, and turns to leave.

L: Wait a minute. I haven't read it yet, pointing to the menus.

Astonished, the waitress pauses.
L's Mom: (handing Lilly the wine list) You can read this.

The waitress departs, but Lilly is not to be ignored. She refuses the wine list and insists upon seeing a "real" menu. Dad goes in search of the waitress and brings back a menu, which Lilly carefully picks up, turns right side up, and opens. She carefully studies it.

L's Mom: (chuckles) What does it say?
L: (Pauses) (In measured tones, she states): rice, noodles, orange juice.

Closing the menu with a satisfied smile, she returns the menu to her mother. Several of the adults congratulate her on her efforts.

Lilly is well along on the oracy to literacy continuum. While she cannot yet read, she has learned many of aspects of reading, and is obviously anxious to get on with the task. Will she need phonological awareness training? One might venture that she may come upon the secrets of sounds and symbols through her own efforts with little assistance. It could be predicted that she'll be rhyming at three, beginning to read and write at four, and a teller of tales at five.

Language. Part 6:The sum of the language subsystems

All five of the language subsystems are important (phonology, morphology, syntax, semantics, and pragmatics). All are involved in spoken and written language. While phonological awareness holds center stage at the moment, and is particularly important as children are asked to begin to read, the Oracy to Literacy continuum requires that all five subsystems blend in concert for young children to become proficient in language, both spoken and written.

Those children who display phonological processing difficulties should be assessed for concomitant difficulties in the other four areas. It is not unusual to have preschoolers exhibit spoken language difficulties in more than one of the five areas. Nor is it unusual to have the spoken language be acceptable while difficulties continue to be found in reading and writing.

While the emphasis on phonological awareness may be new to many, Liberman and Shankweiler (1979) were addressing this issue twenty years ago. Now, however, there is consistent evidence from many investigators in several countries (Liberman, A. M. 1998; Lundberg, Olofson & Wall, 1980; Scanlon & Vellutino, 1996;Torgesen, et al. 1997) that *explicit* instruction in phonological awareness and *intensive* initial reading instruction may be of considerable assistance to at-risk and language delayed children.

Formal schooling with its focus on learning to be literate demands that children must become increasingly capable of shifting along the multiple dimensions of the Oracy to Literacy Continuum. The nature and changing features of this continuum requires that professionals and parents become intimately acquainted with both spoken and written language development.

The underpinnings of eventual literacy appear very early in life, in the form of speech sounds in response to adult vocalizations. One good turn deserves another, as we see when children have learned to listen for adults' language at 3 months, "read" a book at 8 months, and turn pages. Pause time, the so-called one-second rule, comes into being at about 12 months, i.e., babies wait about a second before resuming babbling when adults "converse" with them.

Toddlerhood brings many additional challenges, as adults await the appearance of first words at 11 or 12 months, and the appearance of two-word sentences and an enlarging vocabulary "conversation" at 18 months.

Later preschool provides even greater areas of emerging literacy, including functional skills in phonological awareness and attention to some aspects of orthography. During the preschool years, adult talk moves from the "here and now" to the "there and then", from what is present in the environment to what is present in the unseen world. The context of the home is no longer sufficient. Children need to learn that language can be "decontextualized", that is, that what is being talked about (What a rainstorm last night!) exists only in the memories of others, but is a subject of discussion at the breakfast table (presuming there is such a thing as a breakfast table around which the family gathers every morning).

Being able to tell stories (e.g. narratives) is helpful in the early years of elementary school, but there is soon the requirement that students can understand and write expository text as well. A "science" book has few narratives and much more information that requires the understanding of concepts which are new to young readers who lack a reservoir of prior knowledge. Again, the rich get richer and the poor get poorer (i.e., those who have a large vocabulary are able to assimilate ideas which include that vocabulary, but those who have a smaller vocabulary become increasingly lost, whether it be science, math, history, social studies, et al., where problem-solving is involved.)

In many ways the oracy to literacy continuum is bi-directional. It becomes a "two-way street", in that those who speak well can read well, and those who can read well speak "more like books." As noted above, the greater prior knowledge one commands, the easier to grasp new knowledge. In the later elementary grades, in middle school, and in secondary classrooms, motivation and self-regulation play increasingly more significant roles. The use of technology may level the playing field, particularly in the secondary and post-secondary realms.

Nevertheless, the most difficult "hill" on the language learning continuum may be the students' ability to conquer the alphabetic principle through internalization of the phonological awareness required to access the meaning of words via the ability to link the letters of the alphabet with the sounds of the English language. This may be one of the most significant achievements of their lives.

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CHAPTER SEVEN

REFORMING TEACHER EDUCATION: NEW RHYTHMS FOR THE DIFFERENT DRUMMER?

JEFFREY GORRELL, PH.D.
Associate Dean of Research & Graduate Studies,
College of Education,
Auburn University

In this article I explore two primary topics associated with teacher education in the USA: the importance of the standards movement as represented by the Interstate New Teacher Assessment and Support Consortium (INTASC), and exemplary ways in which teacher education programs are being reformed. These topics are central to any discussion of improving teacher education, for they capture the spirit of the times and the many excellent efforts that are being made to improve the preparation of our nation's teachers.

In 1998, a study of teachers', parents', administrators', and educational professors' attitudes about learning and schooling yielded an interesting but not surprising finding. Many education professors hold opinions about schools, discipline, curriculum, and teaching that are different from those typically held by the rest of the school-based population. This report, titled "A Different Drummer," portrays education professors as being more idealistic and liberal in their views than others are, suggesting that they are woefully out of step with the rest of the country. Another possibility, however, may be that the differences in certain beliefs are more a matter of recognizing new and better ways of learning that have not yet been accepted or understood by the general population. If that is the case, the issue may rather be one of whether the schools and colleges of education are doing enough to educate others about the possibilities for improved learning in our schools.

While there are visions of learning that deserve to be given wider credence and to be applied in many other settings, we seem to face regularly the problem of preparing teachers for schools that are not really ready to receive these new ways of teaching effectively. Thus, the dilemma may be more one of how to connect our knowledge with schools more firmly and more meaningfully than we have in the past. The standards movement, described in the next section, is part of the resolution of the dilemma of how to connect emerging knowledge of learning with schools through the preparation of new teachers who have realistic understandings of schools and teaching, while bringing to their new jobs a wealth of new knowledge about learning.

The standards movement in the USA grows out of serious concerns about

Standards

the quality of public education which many people, including many professionals and parents, believe has decreased in recent years (A Nation at Risk, 1983). A proliferation of social problems, such as poverty, drugs, and violence, undermines the capability of schools to teach our children in order to enable them to move successfully into the adult communities across the nation. Coupled with these problems are concerns that schools have lost their capacity to address the personal developmental needs of students who come to school with various backgrounds and knowledge bases (Hargreaves, 1994). As schools have sought to address many underlying social problems, they are perceived as devoting less time and less effective effort to the teaching of basic and advanced skills. Thus, standards are seen by many as a way to refocus schools and teachers on the primary responsibilities of teaching (Darling-Hammond, 1996).

Why Standards are Important for Teachers

One of the most important functions of standards is that they provide individuals with high goals toward which they may strive. Standards indicate the level of expectations for professional practice that may be related to expectations from many sources, such as the profession itself, the community, schools, and parents. Schools or teachers without clearly defined standards tend to be adrift, not certain about what is important and not sure about whether they are attaining their goals.

Standards are being used more and more in education as the basis for making decisions about how teachers are prepared to teach, whether teachers are teaching competently, and whether experienced teachers have attained even higher levels of accomplished practice (Wise, 1994). Thus, the Commission on Teaching and America's Future recommended strongly that teachers be licensed according to whether they meet performance standards (what they should know and what they should be able to do) rather than being licensed based upon completion of a list of courses or specific experiences. This movement away from dictating a curriculum that they should follow to a body of knowledge and skills is consistent with licensing practices in other professions and focuses upon what really matters: the capability of teachers to teach well.

Standards for New Teachers

New teachers typically graduate from teacher preparation programs at public and private colleges and universities across the country. These programs tend to look similar because of some common understandings of what is necessary to prepare teachers to enter the classroom and to be "safe to practice." Thus, most programs of study contain foundation courses in philosophy, psychology, and sociology of education. They may contain courses in special education, in assessment, and in the use of technology in the classroom. They also typically contain applied methods courses designed to provide prospective teachers the skills associated with teaching particular subjects. Finally, they require internship experiences where pre-service teachers teach in the schools, under supervision, for eight to twelve weeks. Because each state has its own set of requirements for licensing teachers, the exact nature of teacher education programs may vary. Also, there is room for schools and colleges of education to add to the basic requirements imposed by each state to reflect the professors' collective professional judgments about experiences or knowledge that should be part of teacher preparation curricula.

INTASC Standards

In an effort to strengthen teacher education nationally and to provide a set of guidelines that will help teacher education programs decide how they will prepare new teachers, the Interstate New Teacher Assessment and Support Consortium (INTASC), a collaboration of more than 30 states and professional associations, has developed a set of teaching principles and standards. These are designed to enable new teachers to be prepared to teach to the increasing educational standards for student performance and eventually to develop advanced skills that would make them eligible for board certification as a master teacher. INTASC's early activity grew out of efforts by specialized professional societies (e.g., National Council on the Teaching of Mathematics; National Science Teachers Association, International Reading Association) to prescribe clear standards for teaching performance based on important principles of teacher effectiveness. These principles are described below:

1. *The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.*
   The knowledge represented in this principle is typically thought of as being addressed directly in teacher education courses as described above. However, the state of the knowledge of any discipline within teacher education is constantly growing and changing. Even though many important concepts, principles and practices endure in each discipline, new knowledge grows in each discipline and teachers are expected to stay abreast of the major changes in knowledge and practice.
2. *The teacher understands how children learn and develop, and provides learning opportunities that support their intellectual, social and personal development.*
   As psychological research continues to expand our knowledge of development and learning, the knowledge base related to this standard also grows. It becomes important for professors of educational and developmental psychology in particular and all professors of education in general to communicate the latest and best knowledge of development and learning in order for prospective teachers to be able to understand the best ways of addressing individual needs of each student.
3. *The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.*
   The field of education increasingly is coming to terms with the fact that students can be quite diverse in their styles of learning, in their background, and in their knowledge base. With the growth of a more culturally and socially diverse country, we have had to confront the fact that learners from different cultures may have different beliefs about the function and importance of schooling, different ways of being motivated to learn, different backgrounds

for understanding the material that is being presented, and different beliefs about the world around them. Therefore, teachers nowadays need to consider many more social and cultural factors related to their students than they considered in the past.

4. ***The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.***

   Contemporary conceptions of schools suggest that they should be centered around learning, not around rules and procedures; that students should be seen as collaborators in the educational process, not as passive recipients of material; and that schools should be held accountable by an internal process that is true to their own commitment and context, not just by external measures (Darling-Hammond, 1992). With this broadly stated viewpoint in mind, teacher education should prepare teachers who can engage students of all types in meaningful learning and who are capable of evaluating the outcomes of their efforts professionally. Thus, a teacher education program and the core of courses that support it should emphasize the nature of learners, the learning process, and assessment of learning outcomes.

5. ***The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.***

   While teachers typically are able to manage relatively large classrooms as they engage in whole-class instruction, they frequently say that they do not know enough about how to motivate reluctant learners, disruptive students, or marginally engaged students. The complexity of student backgrounds and their many different motivations require teachers to be more flexible and understanding of each student's interests and capabilities. Student engagement in learning is generally considered to be the clearest indicator of a teacher's ability to motivate. New teachers, in particular, need to have the essential knowledge and experience related to many different students to enable them to engage students in meaningful and productive learning.

6. ***The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.***

   This standard represents the fact that conceptions of best teaching practice in the USA has moved away from teacher-dominated talk (lectures, recitations, question and answer sessions) to the use of many different sources of communication sources (computers, videos, interactive materials, cooperative learning, etc.) New teachers are expected to master many more techniques and methods of teaching than in the past in order to engage students in learning and that enables them to be active participants in group and individual learning.

7. ***The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.***

   New teachers are expected to have strong backgrounds in the

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discipline that they teach, as well as knowing about their individual students, the community in which school is placed, and the communities from which the students come. The ability to plan instruction effectively depends upon their being able to integrate each of these considerations with the stated curriculum of the school or the school system. This requires constant attention to the nature of learning, the needs of learners, the cultures of the community, and the body of knowledge (content) that is represented in the discipline itself.

8. *The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.*
   Prospective teachers should acquire knowledge and skills necessary to build on previous content and to plan instruction based on sound principles of teaching, learning, and assessment. In addressing topics related to development, learning and motivation, much of the course of study should be organized around practical issues related to the influence of prior knowledge on learning and creating a climate where individual differences are respected and accommodated. The course of study can also incorporate primary assessment issues with emphases on using a variety of assessments for the many different teaching and learning (including student diversity) situations and on integrating instruction and assessment.
9. *The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.*
   In the past decade there has been an important shift in understanding of teachers as active, reflective practitioners (Loughran, 1996; Schon, 1983), rather than as purveyors of ordinary practice that is passed down from one teacher to another. Therefore, new teachers are expected to have the habit of reflection in order to improve their practice continuously. This is a demanding intellectual activity that requires teachers to view objectively the outcomes of their teachings, to evaluate their practice against those outcomes, to solve problems in reaching students, and to continue to develop increasingly effective means of teaching to the needs and backgrounds of all students.
10. *The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.*
    This component of teacher practice has received much more attention in recent years because we understand better the need for teachers to be well aware of their relationships with the community and, especially, the students' parents. Standards that expect new teachers to focus on their relationships with parents and the rest of the community reveal the role of teachers that must be developed early in their professional life.

When states require that new teachers be prepared according to performance standards, rather than by following a prescribed list of courses, schools and colleges of education have more flexibility to create meaningful courses and other learning experiences that lead to sound teaching practices. While many elements of teacher education curricula may look similar under these new conditions, the differences can be dramatic as well.

In this kind of performance-based licensing system, schools and colleges should be directly and clearly responsible for the competencies of their graduates. In the curriculum-based system, colleges of education typically have been officially responsible only for offering the required curricula. In the performance-based system, some states are already requiring that colleges of education guarantee the quality of their graduates. This may include even requiring them to remediate, at their own expense, any limitations of their graduates who do not meet minimum teaching competencies in their first jobs as teachers (typically determined by principals and supervisors who observe the teacher's classes).

INTASC standards are quickly becoming guidelines for teacher education programs to determine if they are addressing the essential needs of new teachers in their preparation programs. Because INTASC standards are based upon current knowledge of best teaching practices and sound research about learning, cognition, motivation, and the impact of teaching methods, colleges of education find many aspects of the standards to be compatible with their philosophies and the academic interests of the faculty. Similarly, advanced understandings of reflective practice and the early growth of professional knowledge of teachers (Darling-Hammond, 1996) suggest that teacher professionalism should be considered in a more open and developmental fashion. Instead of thinking of new teachers as needing to learn specific techniques and strategies that they automatically apply in the classroom, those teachers are seen as being engaged in sophisticated problem solving. This means that their preparation should engage them in problem-solving experiences in order to build up those abilities when they become teachers.

Reforms in Teacher Education

What are some of the ways in which teacher education programs around the country are addressing certain important themes that are found in the INTASC standards? Some of the universities which are cited in this section have been leaders in teacher education reform and in collaborations between schools of education and public schools for years, well in advance of the INTASC standards. In fact, some of them, because of their forward-thinking curricula, have been significant influences on the development of those standards. In all cases, I recommend that any interested reader seek more complete descriptions of the programs that I am merely highlighting in this article.

Extended Programs

The concept of teacher education as a five-year course of study as a way of assuring that there is sufficient attention to the students' academic background as well as providing enough opportunities to master the pedagogical knowledge needed for successful teaching has been around for many years. One university that is noted for its extended program is the University of Cincinnati, which has established professional practice schools that involve professional teams composed of lead teachers, career teachers, and student interns who teach full time, creating new roles and thoughtful inquiry related to teaching. The Cincinnati Initiative for Teacher Education provides for pre-service teachers to obtain two degrees in five years: a bachelor's degree in a formal discipline and a bachelor's in education. The fifth-year internship combines one-half time teaching with coordinated seminars under joint supervision of campus and school-based faculty. This program has been highly praised by professors, students, teachers, and administrators for its "clinical, field-based, reality centered experience...[that] brings practicing teachers and education faculty into new working relationships." The University of Louisville redesigned its teacher education program around a bachelor's degree in a discipline with a minor in education and a graduate-level certification program. Extensive field experience is built into the program with groups or networks of teachers involved in developing the new program.

The University of Florida's PROTEACH program for the preparation of professional teachers also provides five years of rigorous study of background knowledge, professional studies, and academic specialization, resulting in a Master of Education degree. Intensive course work outside the College of Education, expanded foundational studies, and clinical experiences characterize this well-established and successful program. At the University of Virginia, pre-service teachers obtain a five-year dual degree (BA and MT) operated by the Curry School of Education and the College of Arts and Sciences. Students (elementary education, special education, and secondary education) receive a BA or BS in an academic major and a Master of Teaching degree, reflecting a strong liberal arts orientation in the curriculum. At Trinity University in San Antonio, students complete a BA in an academic field, then have a fifth year for certification and a Master of Arts degree. The Master of Arts in Teaching (since 1991) has received lots of national attention for its success in recruiting strong students and working through partnerships with schools. Wheelock College has created a notably different approach to extended programs. Students there receive a bachelor's degree in Arts, Human Development, Humanities, or Mathematics/Science. They also choose one professional study concentration: child life, early childhood education, or elementary education.

Integrated Content

Teacher education programs are beginning to integrate content (e.g., English, mathematics, sciences) and pedagogical knowledge (teaching and learning processes) in their curricula, recognizing that preparation of truly professional teachers involves more than the offering of a set of loosely connected courses. It requires a substantial interweaving of all knowledge into a meaningful whole. Some examples of how this is being done at curricular levels are listed below.

At Stanford University, some professors have created educational psychology and foundation courses that reflect the actual learning processes in classrooms, using a discipline-based and text-processing approach. Since students at all ages, especially later grades, encounter texts from which they must make meaning, the courses examine texts and consider ways that learning principles (cognition, motivation) influence students' comprehension of texts and their learning.

Auburn University recently created a six-hour block course on "Diversity of Learners and Settings." This course introduces students at the beginning of their teacher education program to the many different kinds of students that they will encounter and explains how to understand and communicate with them.

The University of Alabama for several years has operated a Multiple Abilities Program that combines special education, general education, school experience, university course content, and teacher education competencies to form an organic whole, built upon a set of thematic organizers that serve as road maps for pre-service teachers. This is an attempt to avoid "isolated, separated, and specialized content removed from authentic contexts." Whole themes (communicating well, enabling students to create their own knowledge, etc.) encompass the domain they represent in its entirety as well as the entire context within which the domain is embedded.

Providing More Experiences in Schools

At many universities around the country, individual faculties are beginning to place their methods classes in a local school in order to have them in the context as they teach and familiar with the context when they do their field experiences associated with the class. This requires much time and commitment to centering course work in the schools, but it is an effective way of linking the teacher education concepts with actual day-to-day practices.

One program that has been highly successful in bringing together teachers, pre-service teachers, and professors around experiences in schools has been operating at Indiana University for several years. Titled "Community of Teachers," this secondary school program is founded on six principles:

Community: accomplished by creating and sustaining small, continuing, diverse, seminars for students throughout their program.

Personalization: each student creates his or her own path to attaining 30 performance standards that represent successful attainment of professional knowledge and practice.

Apprenticeship: Each student selects a mentor teacher from the public schools and works with that teacher throughout his or her program.

Intensive Fieldwork: One day each week is spent in the mentor teacher's school, providing continuous service and allowing the student to take on greater and greater responsibility.

Authentic performance: students demonstrate that they live up to 30 program expectations through their preparation of a portfolio that documents attainments at a high quality level.

Democratic governance: any Community of Teachers member (faculty, teacher, student) can propose a change in the program's operation, which is voted on by all members of the community, thereby allowing for flexibility in the program when it is needed.

At the University of Colorado, Denver, all teacher education candidates have their clinical experiences in a partner school, instead of individual, isolated cooperating teachers in widely dispersed schools. Participating faculty spend one full day each week in the partner schools, receiving teaching-load credit for three of the five courses they are required to teach each year. Focus groups (partner school's principal, site coordinator, and several teachers) help the college evaluate the professor's roles and accomplishments. And finally, at the California State Universities in Los Angeles (Northridge, Long Beach, etc.), the DELTA Project (Design for Excellence Linking Teaching and Achievement) sends faculty regularly into participating schools to engage in support of interns, new teachers, and advanced teachers. Combining pre-service, induction, and in-service functions in the schools with realistic and immediate problems enables participating faculty and school teachers, as coaches, to stay in better touch with universities and schools and to improve the preparation and advanced development of quality teachers.

Improved Internships

Recognizing that for the vast majority of pre-service teachers internship experiences are the defining experiences prior to taking their first full-time teaching job, schools of education have tried a variety of ways to improve that experience. The most promising way of improving internships is to lengthen them from one semester to the full year. However, making that change is costly. It requires twice the number of faculty to supervise, it takes twice as long before pre-service teachers enter the work force, and it requires twice the commitment of cooperating teachers in the schools. Some universities, realizing the resource demands that yearlong internships create, have been experimenting in conjunction with local school systems with relatively cost-effective means of extending the teaching internship.

At George Mason University, interning students are hired as full-time substitute teachers for a year, assigned to no more than two schools. During the year, those teaching at the elementary level switch from upper to lower elementary classrooms to give a variety of experiences. For the internship, they are assigned to a teacher in the usual way. They are paid as substitute teachers for those days when they are not fulfilling their internship responsibilities, thereby providing them with greater teaching experience and providing the schools with high-quality substitute teachers who are committed to the schools in which they work.

In a similar vein, the University of Memphis has created a year-long program that provides students with a one-year paid internship in the Memphis City Schools, paid at 85% of a beginning teacher's salary. The other 15% is used to hire a retired master teacher to mentor the student full-time for the first two weeks, and then once a month thereafter. The teacher is trained to be a mentor. There is also the usual teacher of record, and a university supervisor continues to meet with the student. Students are selected carefully (following recommendations from faculty and interviews with staff of Memphis City Schools) and they must commit themselves to three years of teaching in the Memphis City Schools after graduation.

The University of Cincinnati extends its teaching internships through professional teams. These are composed of lead teachers, career teachers, and student interns who share instructional responsibilities for clusters of classrooms or teaching loads, along with a school-based coordinator who holds affiliated faculty appointments at the University of Cincinnati and who connects the teachers with the University of Cincinnati's teacher education program. This program enables interning students to receive multiple levels and types of mentoring, as well as to participate in a variety of teaching settings.

More than ninety schools and colleges of education that belong to the

Partnerships with Schools

Holmes Partnership continue to develop stronger and richer relationships with local schools, a trend that has been accelerating in the past five years and that encompasses universities throughout the country. Many other universities subscribe to the partnership and collaboration model, even if they do not belong to the national organization that so effectively is spearheading the professional development school models that underlie university and school partnerships. The following are a few notable examples of places where partnerships are developing along some non-traditional lines, creating and expanding partnerships in many different ways.

The University of Oklahoma has set up a systematic way for undergraduate students from the College of Education and from other colleges to participate with mentors from the schools on school renewal. Education students are using the experiences to further their professional understandings while learning to be teachers themselves. Students from other colleges are building a better understanding about education and, possibly, a commitment to education that will extend into their own professional lives. Barry University recently created a charter school on its campus to serve the needs of low socio-economic children in the community surrounding the University. Used also as a professional development school for preparing new teachers and engaging faculty in improvement of education, this school represents a commitment to public service that infuses the University. It serves as a model for linking teacher education with the important needs of the community in which the University is placed.

At the University of Colorado, Denver, a desire for shared governance created between the School of Education and partner K- 12 schools led to the creation of two councils composed of faculty from both areas. One council, the Initial Teacher Education Council, is related to teacher education, and another, the Twelve Partner Principals, discusses issues that should come before the Initial Teacher Education Council. Through these collaborative councils that link the needs of schools with teacher education, the University has been able to strengthen school improvement planning, to improve teacher education, and to encourage teachers in schools to engage in action research and in data-based decision making.

In George Mason University's School-Based Master's Degree, a different approach to partnerships is being used to improve the quality of the masters' degree and to use completion of that degree to situate advanced learning in the context of the teachers' own classrooms. Teams of teachers (3-6) are recruited from individual schools and function as cohorts, taking intensive courses during the summer, plus committing to 4 days (two Saturdays and two release days) each semester, plus regular visits by faculty to the school teams. Courses are not traditional semester courses. They can be condensed or spread out. Half of the credits (15 of 30) are given for school-based research and study, including a major team project, allowing for specialization of study to issues of greatest interest and need of the teams. As one superintendent said about the program, "The program has given new meaning to the word professional. The work is inquiry-based, which has promoted autonomy and self-direction. These teachers involved in the program are now leaders within their buildings and are sought by their colleagues on many issues."

From the descriptions of teacher education reform presented in this

Conclusion

document, we see that schools of education are taking seriously the task of improving teacher preparation for the future. Frequently facing limitations on resources such as time and money, these programs have been inventive in their rethinking of major components of their programs. They are not alone in that enterprise. Throughout the country, teacher education programs are changing for the better so that they can continue to provide well-educated, committed, and professionally prepared teachers for America's schools.

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CHAPTER EIGHT

Discipline Based Arts Education (D.B.A.E.) And SmartArt

SUSAN HOLMAN, M.F.A.
Art Educator,
New Orleans, Louisiana

The art disciplines have long been recognized as essential elements of all cultures. However, many have debated the role of art in education as to its relevancy in the curriculum. I would like to address that question: Why art in education? The first step in understanding the role of art is to accept that art is about process, not product. It concerns our human potential for creativity and imagination, no matter what age we are.

I'd like to share a poem a third grade student of mine wrote titled, " A World With No Art."

A world with no art means no color,
All working days with no fun.
It means every day would be cleaning,
And no taking naps in the sun.

A world with no art means no pictures,
To look at when you need a rest.
It means the world cannot be pretty,
And be a universal guest.

The President's Committee on the Arts recently released its report on the state of the arts in America and stated, "There is abundant evidence that participation in the arts unlocks the human potential for creativity and lifts us beyond our isolated individualism to share understanding. Art offers lessons on the human condition that connects individuals to the community and overcomes the social fragmentation that many Americans feel."

Benjamin Barber observes that "culture and democracy share a dependence on one extraordinary human gift: imagination. Imagination is the key to diversity, to civic compassion and to commonality. It is the faculty by which we stretch ourselves to include others, expand the compass of our interests to discover common ground and overcome the limits of our parochial selves." He further states, "The arts are civil society's driving engine. Therefore, a society that supports the arts is not engaging in superfluous activities so much as it is assuring the conditions of its own flourishing."

CHAPTER EIGHT

There exists a hunger in America for cultural pursuits. The bureau of the census's surveys in 1992 indicated that 42 per cent of the population attended theater, opera, and ballet; heard a jazz or classical concert; or visited a museum or gallery. How does this obvious interest then impact education? Researchers are demonstrating there are many ways children learn: through spatial, musical, kinesthetic and linguistic intelligence. Studies support that students develop creative thinking through the arts and transfer that capacity to other subjects.

The College Board reported that students who studied the arts for more than four years outperformed non-art students on the Scholastic Aptitude Test (SAT). A study conducted in Rhode Island, focusing on students who participated in music and visual art classes, demonstrated that their reading and mathematical skills increased dramatically compared to students who did not participate in the arts. The Los Angeles Humanitas Program showed impressive gains concerning students who had an art-enhanced curriculum. Of 3500 participants, those involved with the arts showed more conceptual understanding of history and made more interdisciplinary references than students not in the program.

These results support the idea that through the arts students learn to express ideas in non-verbal forms, create multiple solutions to problems and enhance higher learning skills. An added benefit is that studies also show that when art is a strong component in school, dropout rates and absenteeism decline.

In summary, the study of art disciplines provides the means of communication as historical components of civilization and is the provider of unique forms of knowledge.

Discipline Based Arts Education:

The past decade of educational reform has seen enormous change in the role art should play in the curriculum. The federal government and private sector have recommended and adopted policies to advance the visual and performing arts as essential to a comprehensive education. The recent Governors' and President's goals for 2000 now include the arts. These educational directives have at their core the vision to graduate students who are artistically literate. However, the gap between the goal and actual practice of arts education in classrooms is huge. The arts do not teach themselves, any more than reading, math, or foreign language.

Our country's cultural life depends on integrating art back into the classroom, as does our students' quality of education. The challenge, therefore, is to find a vehicle that will translate what has been often considered the domain of the elite and offer to all students the opportunity to engage in the richness the art experience affords. That vehicle is Discipline Based Art Education.

Discipline Based Art Education (D.B.A.E.) is a nomenclature for a movement begun in the mid-1970's. The discipline based approach is a conceptual framework that expands teaching and learning beyond art production to include aesthetics, art history and art criticism. The Discipline Based Art Education has come to mean more than just the presence of these four components. It is a road map for a journey to transform knowledge, in and through the arts. It allows students to move from a traditional model of doing and knowing facts and skills about these four components to a deeper understanding about the role art plays in the bigger picture of life.

To briefly summarize those objectives:

- **Art history**: we place works of art in their historical and cultural context.
- **Aesthetics**: we experience aesthetic qualities and consider the philosophical issues associated with the art world.
- **Art production**: we produce art, becoming familiar with materials and tools; express thoughts, values, and feelings; and develop personal qualities such as persistence, patience and self-criticism.
- **Art criticism**: we make informed judgments about works of art.

SmartArt Program:

The SmartArt program of the Center for Development and Learning (CDL) in Louisiana is an example of Discipline Based Arts Education in action. It uses community service projects in the arts to help New Orleans area children at risk of school failure experience the joy of creation and giving to others. It teams local artists with small groups of children to design and create a work of public art for their schools. The program is conducted on school grounds, with assistance from parent and teacher volunteers.

SmartArt began in January of 1994, and is in its sixth school year of operation. Its purpose is to give children at high risk emotionally, socially, and academically an outlet for creative expression, an opportunity to make a contribution to their school communities, and an alternative means to success. By producing high-quality artworks in concert with others, children find what Robert Brooks calls "islands of competence in a sea of failure." SmartArt encourages and engages at-risk children, giving them a safe, stable learning environment and providing them with a unique opportunity to develop their skills and aspirations. Goals for the SmartArt program include:

- Increased sense of connection to the school community
- Increased ability to work collaboratively
- Increased self-esteem and resiliency
- Improved academic performance
- Reduced absenteeism
- Reduced incidence of behavioral infractions
- Increased exposure and access to the arts
- Increased knowledge of the four disciplines of art
- Increased knowledge in a specific academic course of study

SmartArt programs are implemented in schools participating in the Center for Development and Learning's professional development programs. In addition to helping at-risk students and producing permanent works of art for the school, the SmartArt projects provide classroom teachers with models for the integration of arts across the curriculum.

SmartArt students benefit in several ways. They interact with creative and successful artists who provide creative role models. These creative, successful adults show the children in a tangible way that it is acceptable to approach life from a different perspective. Student's higher learning skills are strengthened in ways that carry over into other subjects. By creating a permanent piece of public art, children who have few opportunities to make a positive difference "make their mark" in a beautiful and constructive way. They learn that they can make a difference in their world. So often branded as "losers", they receive new status and respect. Finally, they learn the joy of giving to their communities through volunteer service. The school community also benefits, most tangibly by the work of art the children produce for their schools. This gives all the schools' students a sense of school pride, which tends to discourage vandalism and other anti-social behavior.

Connecting the SmartArt Program to the Four Disciplines of Art Education:

Each of the SmartArt projects has been multi-tiered, has provided a meaningful introduction to the arts and the arts world, and has provided an integrated introduction to the disciplines of the arts. For the sake of expediency, I will highlight two of the projects:

Totems: Windows of the Soul (1997-98). The objectives of this project addressed all four disciplines of art education. History: To understand the function of art in the Native American culture; to interpret and analyze the execution and materials indigenous to various tribes; to respond to the influence of other cultures on a tribe's art from a historical perspective; and to recognize and appreciate the evolution of art in the present, based on those influences. Production: To gain experience and confidence working with multimedia, and to develop skills and techniques in 2- and 3-dimensional media: drawing, painting, and sculpture. Aesthetics: To interpret why American Indians consider art to have meaning and function as opposed to being decorative, as in the European perspective. Criticism: To understand the function icons have in cultures and as a vehicle for art, and to reflect on the comparison of different styles and techniques of those icons as they relate to each culture.

The totem project worked to get students in touch with themselves as individuals related to other cultural contexts; to develop not only a celebration of themselves by designing a spiritual self-portrait, but to also create a respect and understanding of other cultures. The students learned how art is a vehicle in all cultures, studied Louisiana nature, and learned about iconography in Native American cultures. They then utilized the images from this iconography to design and create totem poles for permanent installation at their respective schools. Each student selected his or her own totem and decorations, which was transferred onto 1' cylinders in mixed media, and then combined to create nine 12' - 15' totem poles. They also created pen-and-ink images that incorporated iconography with their own internal experience. Despite the high level of content matter and technique to be learned, the complexity of the project, and the students' inexperience, the quality of the artwork the children produced was outstanding, gaining two prestigious exhibitions and attracting extensive news media coverage.

But the real power of this project came from the holistic integration of the self and humanity. Hundreds of images and icons from Native American iconography were used to express the inner lives of these students. Not only were these totems and drawings individual self-portraits, they were also a celebration of many cultures. The project gave these students a deep connection not only with themselves, their fellow students, their families, and their school communities, but also with peoples of other times, places, and cultures.

The Puppet Project: Ghosts of Our Past (1998-99). This year's project is the construction of life-size, mixed-media puppets of people from history who have had an impact on society. The concept is to create a vehicle for students and teachers to use in their classrooms and throughout the school to facilitate learning. The SmartArt students are the production staff for the puppets, which will be featured in a permanent exhibit at the school and be made available for teachers to use for instruction. Ten to fifteen children per school research and create one puppet each, becoming an authority on that individual.

This project helps students grasp the importance of the individuals who have helped shape our lives in fields of study ranging from sports to science. By utilizing life-size puppets of these individuals, students develop an intimate understanding of the personalities and life circumstances that impacted the contributions these people made. Historical figures come alive as students literally "step into their shoes" and speak for them.

Again, the project is multi-tiered both in content and in art production. Students study the portrait and biography of the individual from history and create a two-dimensional drawing. They are taught the proportions of the human face and figure along with drawing techniques. These portraits are then transferred to a three-dimensional sculpture, during which the students are taught sculpture and painting techniques and concepts. The student is responsible for the construction of the body and clothing to match the style of that person. Finally, the student writes a script based on the life of that individual.

Impact of the Programs:

In the last two decades, there has been an explosion of knowledge about the neurological and psychological processes involved in learning. This research has uncovered a rich diversity in the way that human minds operate, a diversity that strengthens us as a socially oriented species. Schools, however, traditionally present information in ways that 20% to 50% of the school-age population cannot readily assimilate or utilize. These students, who often score highly in areas of intelligence not addressed in the traditional classroom, struggle or fail. In addition, the learning process of every type of mind has been shown to contain elements of emotion, connection, application, creativity, and synthesis that have been largely ignored. Discipline Based Arts Education programs address many of these elements, but as more arts programs are eliminated from our public schools, children inclined to academic difficulty find fewer avenues for achievement.

The Center for Development and Learning is in the business of saving children's lives. Over the last six years, the SmartArt program has helped 341 runaways, introverts, outcasts, and behaviorally and emotionally troubled children blossom into confident youngsters who can point to real accomplishments. The SmartArt program exemplifies and celebrates the power of the arts to encourage and engage children in a safe, stable environment, and provides them with an outstanding opportunity to develop their skills and aspirations.

CHAPTER NINE

CONNECTEDNESS:
A Legacy To Our Children

EDWARD M. HALLOWELL, M.D.
Child and Adult Psychiatrist
Director
Hallowell Center for Cognitive and Emotional Health Faculty
Harvard Medical School
Cambridge, MA

What I really want to talk to you about is this theme of connection, because I think it is so important and powerful. I would like to get into it in a variety of different ways.

I have both attention deficit disorder and dyslexia, myself. Someone asked me yesterday how I define dyslexic? I'm defining it very broadly to mean slow to learn to read and spell your native language. I couldn't read throughout 1st grade and well into 2nd grade, and I was told back then that I was a mirror reader. That's the diagnosis I was given. To this day, I'm a painfully slow reader, extraordinarily slow reader. It takes me forever to get through a book; I read it in sort of snitches and snatches, and I kind of jump into the middle and back to the front and off to the end. I kind of read it by osmosis. But I did end up majoring in English at Harvard College and graduating with high honors, so you can have this kind of reading problem and still achieve in the world of words.

I also have attention deficit disorder. I have one child who has inherited from me both of those conditions and two other kids who I don't think have it. I am married to someone who has neither of those conditions, although she wonders if they're contagious sometimes. I also want to tell you a little bit more detail about my personal story because it's very much relevant to what I'm talking to you about today, which is the power of connection.

You see, I think the power of connection underlies virtually everything we do in life, and, if you don't pay attention to that first, everything else will be built on a shaky foundation. All the pyrotechnics you can come up with in terms of intervention, assistance, and accommodation is built on quicksand unless you pay attention to the fundamental connection in these children's lives and in your lives.

My life was built on quicksand. I come from an old-fashioned, New England waspy family, and for those of you who know Wasps, you know we're not known for our emotional stability. My family is characterized by what I call the Wasp triad, which includes alcoholism, mental illness and politeness. My family tree is riddled with all three of those qualities. My mom was alcoholic, my dad was psychotic and manic-depressive, my mom remarried a man who is also alcoholic, and my brother is psychotic, manic-depressive. The family is full of craziness. They are wonderful people; I adore them all. My mom and dad have both passed away, and I thank them every day in my prayers for what they did for me.

But, there was a lot my parents couldn't do, not because they didn't want to, simply because they were unable to. They just couldn't do it. And, this is the case with many parents. In my case, my mom was smart enough to know that I'd be better off somewhere else and my grandmother was lucky enough to have the money to afford to send me away. So, paid for by Grandma, I went off to boarding school in the 5th grade, and that's where I grew up. Boarding schools became my home from 5th grade on. The people who saved me, the people who solidified my connection in life, were teachers. Teachers are absolutely and definitely the reason that I am here talking to you today instead of being in a mental hospital, a prison, or a shelter somewhere. Studies will tell you that 90% of the kids with the genetic load that I carried and the kind of childhood that I experienced end up in very bad straits.

The 10% of kids who do okay, like me, are the ones who are somehow or other, able to find meaningful connections, and this is where teachers become so tremendously important. Never think for a second that what you're doing is simply teaching reading or math, as if that weren't enough. Always, always the subtext, whether you know it or not, and most of the time you don't, is the saving of souls. Positively, absolutely, it is nothing less than that. Anytime you drive to work and think that you're burning out, just think of all those guardian angels hovering above the school that are depending on you to do their work for them when you get there.

Next, I want to talk about several things in our time, all along the theme of connection. I want to talk to you about some obstacles to connection in today's world; I want to give you some very powerful scientific evidence, not just anecdotal evidence, but real hard-core studies that show, that prove the life-saving benefit of connection. And, then I want to describe to you different kinds of connection and give you some concrete suggestions as to how to increase connections both in your life and in the lives of the kids that you work with, as well as with your family and your neighborhood.

Let me start with some of the obstacles. Modern life has become disconnected. The irony is we live in a more connected time than we've ever lived in before. Electronically, we are hyper-connected. Perhaps the single most striking development in the second half of this century is the proliferation of electronic communication. It's always brought home to me when I go to fancy hotels and discover a telephone in the men's room or in the bathroom in my room! I'm sitting there in the bathroom and I see the telephone, and I wonder to myself, "Now, what is the etiquette? What if it rings? Hello, where are you?" It's become so that we are all instantly available electronically anywhere, anytime. A recent example in the news was the person from Mount Everest who was talking to his wife on his cell phone as he was dying! We are electronically connected all the while. And yet, ironically, something has happened to disconnect us interpersonally.

I was talking about this phenomenon with a producer at CBS in New York not long ago, and she was saying, "Yes, it's so true, I haven't heard it given a name like this but it brings to mind a story. I live in a suburb and I have to commute to work. For the past several years, at my bus stop every morning, I would see the same man standing in my proximity. Every morning we'd see each other. This went on for a couple of years until one day he took the great leap of saying 'hello', and I said 'hello', and we exchanged a little small talk. It turns out we were almost neighbors, we lived three houses apart and we didn't even know each other. Well, for the next year, when we met at the bus stop, we would smile and say 'hello'. That went on for a year. Then, three years into our relationship, he took the great step of saying, 'We must get together sometime.' And I said, 'Yes, we must.' Well, that went on for another year. Four years into the relationship he said to me, 'I'm going to take the bull by the horns. Please come to my house tonight after dinner for dessert at 9:00.' I said, 'Okay, I'll be there with my husband.' I came home after work and said to my husband, 'Oh my gosh, you know what I've got us into tonight? Instead of just having dinner like we do and watching TV and going to bed, we have to go over to the neighbor's house for dessert.' And he said, 'Oh, God, why did you commit us to that. I don't want to do that!' 'But,' she said, 'I said we'd do it, so we're going to have to do it.' So, they had dinner, they did the dishes, and they went over to the neighbors' house. The next thing you know, they were staying up until 1:00 o'clock in the morning, having the greatest time talking about the neighborhood and talking about their lives. They had made a new set of friends."

But, look at the inertia that they had to overcome. Look at the tremendous energy they had to expend, just to make that kind of connection. I think that is very common as we look around in today's world. There are forces, sometimes simply fatigue and being too busy, which keep us from connecting with our neighbors and from connecting with people who are closest to us.

It's also a time of interesting polarization. I thought of this yesterday, both when Dr. Lyon was talking and when Bob Brooks was talking. Dr. Lyon was talking about the warring factions in the reading community, whole language versus phonics. When you mention it, suddenly you have warring camps coming at you. Bob Brooks was talking about children needing a defense attorney as opposed to a prosecuting attorney. Around children you often see these warring factions. Everywhere you look in American society, it seems as if we're forcing each other into these polarizing camps - are you a liberal or conservative? Do you want the president convicted or are you tired of the whole thing? Are you a "good guy" or a "bad guy" is what it comes down to. And we have these ways of forcing people into these positions, forcing them to take a stand - and, then we say, "Ah, check you off, you're a bad guy because you don't agree with me on the following seven points."

I hate politics for that very reason. I don't understand politics at all, but what I particularly despise is the tendency, through the political lens, to judge people, polarize people, and pigeonhole people before you know their hearts at all. There is something, again, about the media-driven culture we live in that tends to have us wanting to check someone off in a little pigeonhole. "Oh, I can tell his position on this, that and the other thing, and, therefore, he's a good guy or a bad guy." We make all these subliminal judgements without connecting with each other at all, without knowing each other at all. There's this tendency to polarize, to push people into positions that they don't necessarily believe in. What you lose in that is the sense of affiliation, the sense of connection, the sense of, well, maybe we disagree about this, but who cares. At a deeper level, we are united in the fact that we're on this planet doing this thing called life, and we need each other to get through it.

You know, you find people who are just crossing people off their list all the time, and their list comes down to just about nobody's left. "Well, I don't like this one for that reason, this one offended me at the cocktail party, this one voted for the wrong person, this one made a sexist remark, and this one didn't donate to the politicians..." You have all these reasons to dislike people, and you're left alone. I see that all the time.

Another obstacle is simply how busy we are. Do you know Juliet Shore, the sociologist, did a study not long ago examining how hard Americans work? And, do you remember, about thirty years ago, there were a lot of articles written about what we were going to do with the coming problem of leisure time? Back when I was in college, there were leisurologists. There were professionals devoted to solving the coming problem of leisure time. Well, what has happened in those thirty years is exactly the opposite. Instead of having more leisure time, we have less, and, as Shore pointed out, on the average Americans are working 160 hours more per year than they were thirty years ago. That's a full month's work - four 40-hour workweeks per year. The calendar has not sprouted another year, so we're stealing this time. Our children are busier than ever. They're being carted from one activity to another, or they're staying up late doing more homework than ever before. Their parents are busier than ever. Everyone is rushing, rushing, rushing, finally to get to bed so they can get up without enough sleep and do it all over again. People are so busy that the connections that are not essential get sacrificed. It's summed up in a wonderful New Yorker cartoon: A man is on the telephone and he says, "Lunch Thursday? Thursday's no good for me. How about never? How's never for you?" You find more and more people sort of filtering into the "never" bend. As much as you want to see them, you know it's never going to happen. This is a problem. Even people who speak the warmest message of connection can behave quite differently because they're in such a hurry or because they're so stressed. This was brought home to me when I was shopping in my hometown in Cambridge, Massachusetts not long ago. I drive a big suburban. I have three kids, so I drive this big bus and parking is always an issue. So, when I find a parking space, I'm glad. I was backing into a parking space in this shopping center, and, just as I was about to move into my space, a little car zipped in and stole it from me. So, I drove off to find another space. But, as I was parking my car and I got out, I noticed the car that had stolen my space had a bumper sticker on it that said, "Practice random acts of kindness." I thought to myself, "Is that your random act of kindness for today?" Even someone like that, who so believes in being nice that he or she puts a bumper sticker on the car to that effect, doesn't necessarily behave that way in the heat of the moment or in the heat of the day when they're stressed.

Another little indicator of this issue of disconnection is a study called the National Study of Daily Experiences that was done just this past year. They surveyed 1500 people in 48 different states and they called them up every night for a few minutes and asked them how their day had gone. They wanted to find out what were the biggest aggravations in daily life. It turned out that the things that bothered people most were not the major events like illness and financial concerns; it was things like hunting for parking spaces and dealing with rude people. Even more interesting, when the study ended after eight days, the people who conducted the study were flooded with telephone calls from the study participants saying, "Don't stop calling." They liked that bit of contact every night. They liked having someone call them every night to ask them how their day had gone. They didn't have anyone doing that. The neighborhood fence isn't there, the casual telephone call isn't there, and people dropping in to say hello aren't there. It just doesn't happen the way it did when I was a kid. I remember people dropping by, even in my crazy household, to say hello, and looking forward to those moments.

If these are some of the obstacles getting in the way, what is this thing that I'm calling connection? What do I mean? Let me flesh it out for you, because I really believe it is a central key to emotional, intellectual, cognitive and physical health. What do I mean by connectedness?

Let me give you some examples. I mean feeling a part of something larger than yourself as if you are joined physically. Not a cognitive state, not saying I'm a member of the Elks Club. That's just a cognitive statement; but I feel a part of this group. You all in this room, over these few days, are developing a feeling of connection. If we stayed here longer, you'd develop even more of a feeling of connection. One of my favorite examples of connection comes from my childhood when I was a first grader back in Chatham, Massachusetts, before I got sent away to boarding school. As I told you, I couldn't read. Back in 1955, at the age of 6, I showed up at public school, a non-reader. All the other kids were learning to read, sounding out words, you know, "ah", "ba", "ka", but I couldn't do that. I couldn't look at an a and say "a". I was read to a lot at home, I came from a family of readers, but I just didn't get it; my brain just didn't do it. All the other kids were catching on, and I was not. As the year went on, I did not catch on, and this was back in the days when your basic diagnostic categories were smart and stupid. And, so, I was prime candidate to be labeled "stupid" and given all the special treatments that stupid kids were given back then, like shame, pain, ridicule, sitting in the corner, and sometimes hit. Those were the treatment plans we had back then, if you were stupid.

I had a special 1st grade teacher who didn't believe in stupid. She had no particular formal training, she just had taught first grade enough to know that "stupid" didn't quite do the trick. So, what did she do? What was my IEP? Her name was Mrs. Eldridge. She was a big, round lady; I can still see her. Everything about her was sort of spherical; round, curly hair, and big, red, round cheeks, and she wore those dresses that had apples on them. I can still see those apples. And, when it came time for reading period, we read at these little round tables like you are sitting at, and the kids would go around, "see spot run, run, run, run". It would come my turn and I would go "duh, duh", because I couldn't get it.

Well, what did she do? She would sit down and put her big arm around me, so I had this big forearm here, my little head here, and a lot of roundness right here. She'd pull me right in there and, as I would stammer and stutter, none of the other kids would laugh at me because it was like I had the Mafia sitting next to me. And that was my treatment plan. That was basically all she did. But that was really all she needed to do – it was all she knew to do. She didn't have any of the better techniques that you all know about now, but she knew that at least she could make the classroom safe for me to use the brain I had. She could make it safe for me to fail. She could preserve the connection to the process of learning and not contaminate it with fear and shame. And, that was so important. If she had humiliated me, I would have put my various mind faculties to work on avoiding reading forever more.

Instead, I looked forward to reading period. I looked forward to publicly demonstrating my incompetence. It was quite a feat to take a first grade boy and have him look forward to demonstrating that he can't do something in public. Because I got that hug, because I wanted to learn how to read, because my family was reading, I didn't feel ashamed that I couldn't read because Mrs. Eldridge made it safe for me. It didn't dawn on me that this was something to be ashamed of. And that, to me, is all about connectedness. Mrs. Eldridge's arm is what we all need around us when it comes to connecting to learning. As Priscilla Vail says, "Emotion is the on-off switch for learning." It begins with an emotional state, then you move into the intellectual challenge.

Some people say you can't have connectedness in today's life; it's too busy. You can't be a high achiever and be connected. I love the example of the Orthodox Jews to dispute that contention. The Orthodox Jews have this wonderful observance where, from sundown on Friday to sundown on Saturday, they can do no work. They can't drive a car, they can't cook food, and they can do no work. All they can do is talk to their neighbors, talk to their family, read the Torah; in other words, connect to God or to each other. That's all they can do. It's this enforced day of contemplation, non-work connection, one day a week. The Orthodox Jews are not a low achieving group of people. It is certainly possible to build into your weekly schedule enough down time to connect with your family, your neighbors, and with God.

The other day I was in New York driving down a street and the cab driver said, "Yes, this is where I used to live, 'Lil Ialy'." He said, "It's different now. There used to be people, old men playing pinochle on the sidewalks on card tables, the candy stores used to have juke boxes where we'd dance, and that's where I met my wife. But it's all different now."

But it doesn't have to be, you see. The power to connect is built in us in a very, very deep level. How deep does it go? I love this anecdote told me by a woman who was attending one of my lectures. She told me about her parents who were in a nursing home. Both parents are severely demented; one has Alzheimer's and is completely out of it, the other has multi-infarct stroke dementia. Neither one knows what day it is, neither one knows where they are, neither recognizes their own children when they come to visit – they are as demented as you could possibly be. And yet, one day, the husband had a seizure, a grand-mal seizure. And, the wife, somehow or other, identified what was going on, knew that he was in trouble, and managed to call the nurse to have someone come help him. The neurologist said this was impossible. It couldn't have happened; but, it did happen. And they sit there during the day holding each other's hands. Again, no apparent knowledge of who they are, but they know that connection. That connection goes deeper even than our understanding of neurology. The connection to each other is to something larger than ourselves. And, I suggest to you that it is the most important thing in our lives. Connectedness has many different forms.

Has connectedness gone forever, and is it impossible to reclaim it? Not at all. A lot of times when I talk about connectedness, people say, "Oh well, the problem is too vast. I can't deal with it in my own life; I'm not a legislator. I can't change public policy." You don't need to change public policy, you need to change domestic policy; in other words, your own lives. And, if you do that for your children, for yourself, or for your classroom, you can create connection. You positively, absolutely can. All you need to do is identify it as something that matters and then take concrete steps. Let me give you an example.

There is a woman who lives in Milton, MA, which is a typical affluent suburb, which happens to be outside of Boston. It might as well be outside of Cleveland or New Orleans or San Francisco or Chicago. It is one of these many suburbs around the country where disconnections reign supreme, where people walk down the aisles of the shopping mall and don't make eye contact; you know, the modern way is to almost make eye contact, but not quite. Calvin Klein designed a whole advertising campaign around eyes almost clicking, but not clicking. People don't look at each other anymore because they're worried about what that person wants from them. When I go into grocery stores, I make a point of making eye contact, and you would be amazed how many people just won't do it, men and women alike. You can almost hear them saying, "What does he want? Is he trying to get something from me?" All I want to do is smile. But, a lot of people don't want to look at you and smile. They think, "This is too weird, I don't want to do that."

Well anyway, this woman named Cindy Sanders was tired of all of this, particularly in her own neighborhood. She found that people just didn't know each other. People three houses down from others didn't know one another; they'd just come home, close the door and go to bed, watch TV, or log on. There was not a sense of neighborhood anymore. She had lived there for 25 years and really had seen it change. So, what did she do? One day she walked down to the town office where you can buy a special kind of telephone book that lists the telephone numbers by street address, not by last name. She got the telephone numbers of all the people on the streets in her neighborhood, and she called them all up. She called up 800 people. She followed that up with going to their houses in person, if she could find them in. She was not a working woman, so she had the day to do this; she was, in fact, physically disabled. She planned a block party, and invited all 800 people. She got permission from the town to cardon off the street, rented a band and a DJ, set up some refreshments, picked the day in the summer, hoped for good weather, and hoped people would come. The night before, she said she was very nervous. She thought, "What happens if only five or six people show up? I have this DJ, and it really rubs our noses in the fact that we don't want to connect."

The day came, the sun came out, and people started coming up the hill out of their doors. Ninety percent of the 800 people showed up, and they were having a block party. They were all talking to each other. The next thing you know, the next day and the next week and the next month, that moribund neighborhood started to reconnect. People knew each other's names, people waved to each other, people started having each other over because people want to do this. It's just that they don't know how; the structures are not in place.

I'll give you another example, this from a teacher of mine. I went to high school in New Hampshire at a prep school called Phillips Exeter Academy. I had a wonderful English teacher by the name of Fred Tramalo; he was one of the many teachers who saved my life. In fact, it was he who told me that I could write, and that I should do that. Last winter I got a telephone call from another teacher at Exeter who said that Fred Tramalo was dying. As it happened, I had just written an essay about teachers, along the lines of what

I'm talking about to you today, and Fred was pretty much the main person mentioned in the essay.

So, I got in my car and I drove up to the hospital in Exeter, the essay with me. I walked into his hospital room and there he was with his wife, Elli, sitting up in bed, bare-chested, white hair (I can see the white chest hair), and a laptop on the table in front of him on the bed. What is he doing? He's writing college recommendations. I said, "Fred, why are you doing that?" He said, "Well, I've only got three weeks to live, and I've got to get these done before I die." There he was, right up until the last. He said to me, "It's hard to know what to say, isn't it?" And I said, "Yes, Fred, it sure is, but I'm lucky, I actually wrote an essay about you. Let me read it to you." So, I read this essay about how he had saved my life, and, when I finished reading it, he looked at me, cleared his throat, and he said, "Well, my feelings aside, that is an excellent piece of writing."

He was teaching right up until the end, helping right up until the end, connecting outside of himself, right up until the end. I'm told that other students came to see him as he was dying, and they would get choked up and start crying. The window of his hospital room looked out at the woods of New Hampshire, and he would say, "Just look out the window." They would look out the window, and then he'd say, "Tell me what you see." What a wonderful way of turning the moment into a learning experience for these kids as they're watching their teacher die. This is connection, this is powerful, this is what children and all of us need every day to make life what it should be.

Another story. A woman that I know, who was in her 50s and was feeling that life was kind of getting too contenuated, started taking morning walks with four of her best female friends. The five of them walked through the woods of Concord every morning. She said, "We get this exercise, but more than that, we get this kind of fellowship. We get the chance to complain about everything that's going wrong, and we exalt in what's going right." They have developed a bond, which she says, "Now I wouldn't be without it. It's as important as breakfast; even more important."

Another example, and this will be my last, comes from, again, my own life, where we go for vacations in the summer. For the past twelve years now, Sue and I have gone off to a little lake in northwest Connecticut, where we rent a place. The lake is appropriately named Lake Doolittle. It's where I do my writing. Over the past twelve years, we've gotten to know the people so well and the friends that come to visit so well, that each August is like a seminar, or more than that, like a celebration of connection: The dinners we have together and the grilling outside by the lake is nothing fancy. It's just a corner of northwest Connecticut. It's not a resort, there's nothing fancy there. It's a little old town that you can drive through in barely a blink of an eye. But what we create there is so wonderful for us because it's in the connection. It's in the celebration of the friends that come back together each summer with new wounds, new victories, new sadness, and new excitements. We hold each other together, doing nothing, achieving nothing, but achieving everything, in those cookouts at night.

Where has it gone, what's happened, why are we losing this feeling of connectedness? I hope the anecdotes that I have given you have imparted the sense of what I mean by connection. Why has it disappeared, or why is it disappearing? It hasn't disappeared completely, but why is it in jeopardy? I have alluded to one reason already – we are going very fast. And, as you know from physics, if you go fast, you don't go deep. The faster you go horizontally, the harder it is to go deep, vertically. We're going so fast horizontally through our day, getting so many bases touched, so many things covered, that it's very hard at any one moment to go very deep with anyone. Last night Gordon Blundell and I reconnected, and he opened the door suddenly and we got very deep, very quickly. That usually doesn't happen, because people don't open those doors. That usually doesn't happen because we're going so fast and we have to get to the next place so quickly that we don't open the door to the depth. We don't open that door, not because we're not nice people, not because we can't be open, but because we're so hurried. And the faster we go, the less likely it is we will have that moment of depth.

That leads to the phenomonum that I see in my office all day of success without satisfaction. We have a lot of stars but not enough heroes. I tell my kids, I want you to be a hero and not a star; if you happen to be a star, fine, but don't make that your goal. I give talks to high schools around the country where I debate with kids. They say, "I want to be a star, that's what life means." Some of these high school students are unbelievably cynical, but they're also very honest. They'll say, "Don't give me this baloney about being a hero – that means nothing. I can't show that off, I can't buy a car with that; I want to be a star, I want to be rich. That's what I want and I will give up anything to get there. Then, I offer my arguments, and some of them think they are ridiculous.

We see an increase in cynicism and mistrust and a decrease in civility. Everywhere I go around the country, people talk about individuals not being as polite as they used to be. Stanley Norgram did a study on urban life twenty-five years ago, and he quantified the fact that when you reach a certain point of overstimulation in your daily life, you start excluding. You start becoming very goal directed. And we tend to be so overstimulated that we are necessarily rude – like the woman with the bumper sticker saying "random acts of kindness". When you get so over-stimulated that you tend to ignore the niceties, you tend to ignore politeness because you have to get to your goal, and you have to plunge through all the stimulation. When you're walking down 5th Avenue in New York, you cannot smile at everyone who passes you by – you'd become a grinning idiot; you just can't do it. Because we're on stimulus overload all the time, working hard and trying to achieve, we often lose track of what matters.

There is medical evidence, as well as emotional evidence, confirming that connection matters. The fact is connection is another kind of Vitamin C. There is the one kind of Vitamin C, which is ascorbic acid. There is also vitamin connection, and if you don't get connection every day, your mind will suffer, your body will suffer, and your soul will suffer. Let me give you some evidence of that.

There was a study done by the McArthur Foundation on aging, which was published last year in book form. This very rigorous, very beautifully designed study was done at many teaching hospitals around the country. They wanted to see what factors made for successful aging and what factors promoted not only length of life, but also a sense of well being as you got older. They also wanted to see what factors tended to keep you healthy and tended to preserve your sense that life was worth living.

The two factors that emerged as most telling were not the factors that you'd expect, like physical health or socioeconomic status. The two factors that emerged as most discriminating were (1) frequency of visits with friends and (2) frequency of meetings with organizations attended. It wasn't enough that you belonged to an organization; you also had to go to the meetings. Those two factors, if you kept up with your friends and if you kept up with your clubs and organizations or church, are what made for a long and happy life. And, the good news is both of those things are fun to do.

What about the other end of life? What about kids? In another national study on adolescents, conducted by Michael Resnick and colleagues, 12,000 adolescents were interviewed in grades 7 through 12 around the country. They wanted to look at the risk factors and identify the protective factors. They were specifically concerned about what would protect adolescents against certain negative outcomes, such as emotional distress, suicidal thoughts or actions, violent behavior, use of drugs, alcohol, marijuana, early pregnancy, or early sexual intercourse. What factors in these kids' lives would protect against these negative outcomes, and what were the risk factors, if any, that could be identified? This was a massive study, published in the Journal of the American Medical Association this past year. The data generated from such a study is very reliable. They interviewed students of all socio-economic status and all geographical areas.

What emerged as most telling? Well, in terms of risk factors, access to guns was most associated with suicidality and violence, and access to substances was most associated with substance use. But, what was protective? What was protective was even more impressive. What protects adolescents against negative outcomes? What can you do in your school and in your family, and how many of us who have kids don't wonder? What can we do to protect against the worst? It's one thing to hope for the best, but can we at least do something to protect against these bad outcomes? The answer is "Yes, indeed."

There are two things that were strongly associated with kids not getting into these kinds of trouble. Number one was **feeling** connected at home. I stress feeling because it had nothing to do with the constellation of who was at home. It didn't say Mom has to be home for dinner when you get home, Dad can't work more than forty hours a week, or you have to have Grandma and Grandpa over for Sunday dinner. There was nothing like that. It was a feeling, within the child, of being connected at home. And that feeling was defined as closeness to Mother and/or Father, perceived caring on the part of the child by Mother and/or Father, satisfaction of relationship with Mother and/or Father, and feeling loved and wanted by family members. If those four feelings were present, that was halfway there toward being protected. You can create that however you want, as a parent; and you know if it's not there. I have seen incredibly connected families where the parent is hardly ever home, and I have seen unbelievably disconnected families where the parents are there all the time. So, this idea of hours at home, I think, is a real red heron. I think what matters are the feelings you create, however you get there. You must create this feeling and connection within your children. You can't say, "Well, I've done all I can do." No. You need to **create** that feeling.

The second half of the equation is feeling connected at school. This was defined in terms of three reports: the child reported he felt treated fairly at school, that he was close to at least a few people at school, and that he felt a part of the school. Again, all these programs that schools set out sometimes get so programmatic that they forget this feeling of connection. The great teachers don't forget that: Mrs. Eldridge's arm, Fred Tramalo. What matters is the child feels connected, feels a part of the school, feels welcome at school, feels treated fairly at school. Kids are very astute judges of injustice, and if you set up a school environment that is not just, the child will pick up on it and feel a sense of disconnection.

That's a powerful statement. Feeling connected at home and feeling connected at school lead to protection in adolescence. I suggest those are both doable, those are both reachable goals, by any school system, by any family. They're not impossible. Do they take work? Yes. Do they take commitment? Yes. Are they easy? No. Do they take sacrifice? Yes. But are they reachable? Yes. Do they cost a whole lot of money? No, and this is where I really admire Dr. Achilles and his classroom size reduction. If there's one reform that needs to be made in this country, when it comes to education, more than any other, it's reducing class size, because everything else follows suit from that. We need to have classrooms small enough for kids to feel connected.

I also looked at this phenomenon in a study I did at Exeter, the high school I attended. Exeter is known for its high-achieving standards. It's a very, very rigorous school. I loved Exeter, but it's not the best place for everybody. The reason I want to quote you the study I did there is it particularly tested this hypothesis. Often, when I talk about connectedness, I'll hear people say, "Sure, it's fine, but . . . what I care about is standards. And, if you're going to have all these kids connecting, you're going to necessarily lower standards. You know, what I want is for my kid to get into Stanford Law School. I don't care if he has happy memories from high school. I don't care if he gets invited to the prom, or not. I don't care if he has friends. I want him to come out of school with the skills required to make it at a top-flight New York law firm, or to get into the residency in neurosurgery that he wants to get into. And I don't care about the rest."

That's a false dichotomy. I looked at this at Exeter, which is a breeding ground of these kinds of high-achieving adolescents, the very top echelon in terms of test scores. I wanted to look at this very idea – is it true that the most successful are the most driven, and the least successful are the most warm and fuzzy? The answer is absolutely not. In fact, it is just the opposite. The kids at Exeter who are the highest achievers report the lowest scores (using psych testing and interviews) in terms of stress and drivenness. And the ones who are the lowest achievers report that they are the most driven and the most stressed. So, the intuitively apparent statement is true. People have been challenging in business and education for way too long that "the better you feel, the better you do." This idea that the more it hurts, the better it is, is simply wrong. This idea, "if we want children to do well we must flog them," is wrong. We have tested this hypothesis for many centuries. Fear, as a motivator, works only in the short term; in the long term, you burn out. That's why Bill Parcell approaches different teams every few years; it works for the short term, it doesn't work for the long term. Fear as a motivator is just not the best way to go. If you want someone to be a life-long learner, you need to instill in them a positive connection to the activity of creation and learning, not some fear of negative consequences if they don't get it done.

Lisa Burkman, who is at the Harvard School of Public Health, did a wonderful study, which was published in 1979. She studied 7,000 residents of Alameda County, California, for 9 years, and she interviewed all of these people. She wanted to see to what degree connections in everyday life mattered in terms of these people's health and happiness. She found that the least connected group, the bottom 25% in terms of connection, was three times more likely to die during the study period than the most connected group. This was the first time that social isolation had been proven to be a risk factor for mortality. We'd always known it was associated with morbidity, the medical term for anything less than death, getting sick, or feeling bad. But, now we had ironclad proof that it was associated with mortality as well.

Social isolation is as much a risk factor in cardiac disease as cholesterol. People don't talk about it – this is why we need to get the knowledge out. Social isolation is as dangerous as not wearing your seat belt, having high cholesterol, or smoking cigarettes; indeed, the Burkman study showed that it was a more powerful risk factor than smoking cigarettes. This study has been replicated seven times both in this country and in Europe. It is now an accepted piece of data. Social isolation is not only unpleasant, it is bad for you physically, children and adults alike. You need your Vitamin C.

Let me talk to you now about different kinds of connection. I have developed a schema with twelve different kinds of connections. What I want to set in your thinking is how to look for these kinds of connections in your own life, in the lives of your family, and the lives of the children you teach. If you develop connections in these twelve domains, I can guarantee you will find yourself happier and healthier. It is one of the simplest, cheapest, and most effective steps you can take to create a better classroom, a better family, a better you, and a better child. The more balanced and connected your life can be, the happier you will be and the healthier you will be. Again, I'm not just saying this out of a belief system; I'm saying this out of hard, proven, scientific data. If we had more time, I could give you a lot more data like that; it's just pouring in all the time now.

What I'm going to do is give you a kind of connection, describe it, and then give you one concrete suggestion of something you might do. I want you to come out of here today with a sense of a concrete game plan: changes you can make or you can suggest that your families make, or changes you can suggest in your classroom to parents that they can make. I can tell you, one of the biggest problems you as teachers are living with is the problem of disconnection in the lives of your children.

Parenthetically, I treat a lot of people with ADD. One of the biggest problems that I see is differentiating ADD, which affects 3-5% of school-aged children, from what I call pseudo-ADD, which affects 80% of school-aged children. Pseudo-ADD is a severe case of modern life. How do you tell true ADD from a severe case of modern life? That's a diagnostic challenge. Pseudo-ADD is culturally induced ADD. It's the symptoms of ADD caused by a disconnected life: a life that's too fast, a life that's not stabilized by connection, a life where the kid is just buzzing on electronic stimuli, never has family dinner, never gets read to, never sits down and talks, never hangs out. He is just bopping from enriching activity to enriching activity, into bed and up the next morning, and into bed too late and up too early. And that lifestyle creates pseudo-ADD; it's all caused by disconnection.

So, as I go through this, the practical message to watch for is how can you help, if not yourself, your students re-connect, re-stabilize, to re-gain a hold on life?

The first kind of connection I want to mention is family of origin:

1. Connection to family of origin – where you come from. As Robert Frost said, "Home is the place that, when you have to go there, they have to take you in." It is the place where your final, ultimate roots

are. We all are ambivalently connected to that place. We all have our good feelings about it and our bad feelings about it. But, it is, probably, at least for very many people, the most passionate, deepest, richest source of connection that you have. Unfortunately, these days it's all too easy to get away from it, so to get away from the bad part, people also get away from the good part. The next thing you know, they have dissipated and attenuated their connection to their family of origin to the point where it's no more than Christmas cards to Grandma or a family dinner every once in a blue moon, where nothing important is talked about and it's all just chit-chat.

One concrete suggestion I would make to you to promote connection to your family of origin - forgive someone. Almost everybody that I know is mad at somebody in their family of origin: a brother, a sister, a parent, a stepparent, an uncle, an aunt, a grandparent - an ancestor. Pick someone out that you're mad at and set about the process of forgiving him or her. However you have to do it, do it; don't take no for an answer. If we could only learn how to use the process of forgiveness around the world, I think we'd all agree we'd have a better place. It takes some swallowing of pride, it takes some hat in hand activity, it takes some willingness to compromise, and it takes some willingness to say, "Yes, I was wrong, I was stupid." It takes all those things that none of us likes to do. But, if you can do it, just think - you're extending your life. Put it in selfish terms: "If I forgive that jerk, I'll live longer. I won't have to carry around that negative energy with me anymore. Ok, I'm not going to let him make me die younger; I'm going to forgive that son-of-a-gun."

2. Connection to the family you create - this is the family that you choose, the family you bring into existence on your own. If you live alone, it is you and your set of friends or you and your pet. But, if you live with someone, it's you and your live-in person, and whatever progeny you might have. There's no one best kind of family. This is a notion that has to be put to rest. There is no perfect family, there is no one way to do family, there's no best way, there's no perfect way. What you want to do is create the feeling of connection, however you get there, whatever the structure of your family is: blended, separated, divorced, integrated, overlaid, overdone, underdone - whatever is there. You want to create the feeling of connection.

   How do you get there? Simple tools - family dinner is one. And, again, this has been proven to be associated with kids learning better. Family dinner. Now, if you're never at home together, have family midnight snack, have family popcorn at 11:00. It doesn't have to be dinner, just family time around the table with food. Food is good because food is like love, and it brings people together. An old teacher of mine used to say food is love. So, a family congregation, a family meeting, or a family dinner is a good way to try to do it. In my family, thanks to my wife, Sue, we have family dinner. It is a circus; it is chaotic. Don't think that you're not doing your job right if people don't sit there nicely and say, "Yes, and what do you think about the crisis in wherever?" No, that's not what happens. Our kids are climbing on their chairs, throwing food. Sue is saying, "Sit with your face to the table, not back to the table." A magazine writer came to watch our family dinner the other day and Sue practically died when she knew that I had invited this woman to come into our house. She said, "She'll see the way we really are." That's the way all families really are, so have the chaos, have the family chaos, once a day - it's good for you. There is also a thing called conversation. A lot of people don't converse, they don't ever interact, and they don't have sentences. They have monosyllable grunts. Converse, read aloud - these are all family-building activities.

3. Connection to friends and community - Remember the lady at the bus stop? It took her 4 years to get to her neighbor's house. This is one of the "I'll do it later" issues. How many friends do you have where you'd say, "Oh yes, Joe is a great guy." When did you last see him? "Well, jeez, seven years ago." You remember him, you have a great memory of him, but you don't know him anymore. You don't have a connection there. Try to keep up with friends, it's one of the best things you can do for yourself, for your children, for your neighborhood. My suggestion here is just to pick a friend you haven't seen in a long time and call him or her up. And, when you call him or her up, say, "I'm just calling to say hello; I haven't seen you in a long time. How are you?" Just that will make a difference and will make you live longer. There are any number of other ways you can think of creating community yourself, like Cindy Saunders with her block party. I like to think of smiling as a way of creating community, just smiling. You don't have to smile at everyone, just smile now and then. You might get a smile back to make you feel good. Have what I call the human moment.

   I just wrote an article in the Harvard Business Review and the title was "The Human Moment at Work". Have a human moment. My thesis was that everything has become so electronic that the human moment is disappearing; the moment where people actually talk to each other face to face is disappearing. It's all done on e-mail, voicemail - we don't actually sit down in person, face to face, and talk. You get so much more face to face than you get on e-mail or voicemail. You get so much more just by laying eyes on someone - just the phrase, laying eyes, me looking at you, you looking at me. We get so much more body language, tone of voice - I think people have an energy that we haven't yet defined, which you just can't get in any other way. And, it's positive. We get afraid of each other in the imagination - you need a human moment to dispel that.

4. Connection to work, mission or hobby - For kids in school, their connection to work is their connection to school, and the connection they feel to school is of tremendous importance. Not their grades - that study said nothing about grades. It said the connection they feel being there. So, as a teacher, say hello to the kids. At my kid's school, Shady Hill that goes to 8th grade, they have a tradition, even in the 8th grade. The teacher shakes hand with each student at the end of the day and says goodbye. The 8th graders say, "Oh, this is stupid." It's a fast handshake, but the school insists on it.

That's just a marvelous example of how to celebrate connection with a ritual. Can you imagine if at IBM the boss shook hands with each employee at the end of the day?

5. Connection to beauty - Again, that may make it sound like it's just for poets and aesthetics, but this is not true at all. Beauty is available in everyday life, free of charge. Kids need to be introduced to beauty. Teachers need to make time for doing this. It's terrible how our art and music are thought of as frills; they're not frills, they're central. They're as important as reading. I think classrooms ought to have Mozart playing in the background. You can introduce kids to art, you can have a few posters of classic paintings in the classroom, or you can just say to kids, "What do you think of that?" I have a friend who works as a curator at the Frick Collection in New York and she has a program where the intercity kids come into the museum every day. She takes them around and shows them Rembrandts and paintings they have never seen. She asks them, "What do you see there?" The next thing you know, the kids are talking about what they see in that painting, what they liked about it, and what they don't like about it; they're making a connection to the world of beauty. That can be sustaining in a very powerful way. I have poetry that I still carry in me from my days as an English major that is just stuck in my mind. Every now and then I say it to myself, like Amantra, when I'm feeling the need for some poetry. "These lulled by nightingales embrace and slept." I won't go on, but that's Milton, and there are a lot of them wandering around in my brain. Kids can get introduced to poetry, the earlier the better. They will form this connection and it will last a lifetime.
6. Connection to pets and animals - Every child, if it's at all possible, ought to have a pet. If it's not possible because of allergies or whatever, then so be it. Classrooms ought to have pets, if you're allowed to. It's really good for kids to have a fishtank or a birdcage or a rabbit in a cage, and to take the responsibility for caring for the animal and the pleasure of the shared ownership of the pet. All this can, again, create the feeling of connection that I've been talking about.
7. Connection we make to nature and to special places - Special places can be a place where you happen to like to study, a special chair in the library, or a special place where you go for coffee in the morning. The whole world of nature is special for me, although it's the beach that moves me like nothing else, because I grew up on Cape Cod. For some, it's the mountains; for some, it's the Mississippi River; for others the hills – the land can speak to us in ways that should be celebrated. Talk about your connection to nature in very explicit terms to children. Again, I don't think you have to take nature walks – you can introduce kids to this by simply calling their attention to it and doing an exercise saying, "What is your favorite place to be, and what do you love about that place?"
8. Connection we make to the past - This is disappearing from a lot of kids' lives; they have no sense of the past. They have no sense of where they came from; they just have a sense that they are plopped down in the moment. I see this in kids with ADD all the time. In

ADD, there are two times: there is now and there is not now. You say, "You're having a test Friday, and they say, "Not now." It's a special problem in ADD where they really need to be taught a sense of the past, but a sense of the future as well. In all of our lives, if we don't cultivate that connection to the past, we won't benefit from it. If we do cultivate it, we will benefit from it; it's there waiting to be cultivated. How can you do it? I'll give you an example. I took my kids this past summer to my Dad's grave - they had never met my Dad, they had never seen his grave. So, I took them. He's buried in a beautiful cemetery, Mount Auburn Cemetery in Cambridge, and I brought them to the gravesite and they started crawling all over his grave. I was about to say, "Don't do that, you're not supposed to step on graves," and then I realized that's as close as they were ever going to get to climb in his lap. So I sort of watched the climbing over his grave thinking, "They're climbing in my Dad's lap." That was a very visceral feeling, for me; it was a very emotional moment. They were connecting to the past in doing that - they were making a connection to my Dad, their Grandfather, and then I took the chance to tell them something about him. I told them some stories and they remember that.

You can help kids connect with the past and it doesn't have to be reading history books. It can be very gripping "in the moment" kind of experiences. Even a name can connect you to the past. My daughter is named Lucy, but she's really Lucretia Mott. Lucretia Mott was an abolitionist in the Civil War years and she's my great, great, great, great, great grandmother, and, so, Lucy is a direct descendent and Lucy is named Lucretia Mott Hallowell. When she first discovered that her name is Lucretia, she was a little bit annoyed, but now, in 4th grade, she tells her friends. One day she came home and one of her friends had heard of Lucretia Mott and didn't believe she was Lucy's relative, so she brought in proof and actually became very proud of this. Now she has a connection. She has a children's book about Lucretia Mott, and it has become part of her identity through this name. All of us have families that have characters in the past that are very worth connecting with.

9. Connection to ideas and information - The world of ideas and information, for children in school, is the stated topic of the undertaking. We think of it often in terms of how much knowledge, ideas and information can we put into them; how much of this can we fold into their systems. I say that's going at it backwards. We want to help them; we want to invite them to connect to the world of information and ideas, just as Mrs. Eldridge did by putting her arm around me. The more you foster that connection, the more the child becomes a self-motivated learner. That's why this notion of teaching as a one-way undertaking misses the point. What the teacher does is facilitate. Learning is necessarily a painful activity because you're stretching. Learning necessarily creates friction; it creates heat. What the teacher is there to do is to provide the motor oil, the encouragement, the challenge, the structure, the guidance, and, above all, to facilitate the connection and to allow the child to connect. Once the child connects, it's fun. The problem is, as

Priscilla Vail says, these kids are not trying to find an easy way out; they're looking for the right way in. And once they find the right way in, it's fun; mastery is fun, learning how to do fractions, once you learn how to do fractions, is fun. What is un-fun is feeling that you're disconnected from it, that it's overpowering and intimidating and impossible. So, you want to help these kids connect to the world of information and ideas, and it's more important now than it's ever been before. We live in a knowledge-based economy. We live in a world where your ability to connect to the world of information and ideas defines in many ways how successful you'll be. Mrs. Eldridge's arm and Fred Tramallo's encouragement have been a godsend for me. They saved my life in creating that connection to the world of information and ideas.

10. Connection to institutions and organizations - Today, unfortunately, this kind of connection is also breaking down. In a kind of cynical way people are feeling that they're not loved or appreciated, and they're not a member. Remember in that study it said it mattered that the kids felt a part of the school? If you feel a part of the school, if you feel a part of your workplace, you will contribute more. You will take responsibility for what's going on, you'll be a good citizen; not because you memorized the Ten Commandments, but because you'll feel inclined so to do. This is where the connection to institutions and organizations has become so powerful. Thankfully, businesses and schools as well are aware of this now.
11. Connection to what is beyond knowledge - This is so important in children: to connect to whatever is out there, whatever is beyond what we know. Call it the cosmos, call it nature, or call it God - whatever your particular way of framing all of that happens to be. Don't do with kids and with yourself what a lot of people do. Don't say, "I can't answer the questions, so I'm going to ignore them. I won't think about them until I suddenly need to think about them." Better to think about them every day, better to exercise that connection every day, even if it's only as a question. What is out there? Speak to me – what is out there? Why don't I know? Keep those questions alive in your life and in your children's lives, and that connection will grow without your even knowing it. The next thing you'll know, you'll have a connection to what is beyond. You won't exactly know what you believe, but you'll feel supported by that connection. In my own family, we happen to be Episcopal, so the kids have been brought up in that particular tradition. I was coming out of the shower the other day and Tucker, our three-year-old, was in bed with his Mom, and I said, "Isn't that cute, Tucker and Mom in bed together." Tucker looked up at me and said, "Oh, no, God's here, too." It was just this wonderful statement of a connection to what is beyond; that he doesn't have to feel alone, no matter what. Kids need that these days, tremendously. I'm not saying you have to teach them one religion or another. I am just saying to try to promote the development of a connection to whatever it is that is beyond knowledge.
12. Connection to self - The connection a child makes to him or herself; the connection you, as a teacher or parent, make to yourself; the

connection all of us make to ourselves is a very important connection. We need to understand how we feel about ourselves. Are we okay within ourselves? That doesn't mean that you have to think you're the greatest person in the world, but just attend to your connection to yourself. Are you comfortable being who you are, or do you have to hide who you are? A lot of kids we are here to talk about today spend a lot of time hiding who they are, pretending they don't have the challenges they have. That's wrong. To give them a healthy connection to themselves, they have to be able to say, "I have what I have." I go on national television and say I have dyslexia and ADD. Some of my patients say to me, "How do you dare to do that? Aren't you afraid you're going to be ridiculed?" Adult patients ask, "How do you dare do that, aren't you afraid you won't get any patients? Nobody will want to come to see you. They'll think you're crazy." What I say is that we're all challenged, and what we need to do now is break down stigma, break down these kind of silly prideful barriers we put between each other and come clean. We all have stuff that we're not so good at, we all have stuff we wish we hadn't done, and we all have stuff that we could hide if we wanted to. Better that we give each other permission not to do that. This begins within. Make the connection to yourself saying, "I am going to accept who I am, and I'm going to be who I am. I'm going to give myself, make myself, a good place to grow. Instead of stuffing into me shame and hiding bad feelings of self-recrimination and bad feelings of not being good enough, instead of pushing that into my soil, I'm going to open up the soil. I'm going to be who I am. I'm going to make myself a good place for me to grow. I'm not going to put any more stuff, toxic stuff, in there to hide my shame. I'm going to be who I am. And the people who like me will like me, and the people who don't, won't, and so be it."

If you can give your kids that kind of an attitude, a powerfully okay connection, not a grandiose connection, but a sense of I'm okay, I'm loved by my parents, by my friends, by my God, by my teacher, by my school - that's enough. I'm safe and I CAN BE WHO I AM. I have Mrs. Eldridge's arm around me - it's okay that I can't read. I've got Fred Tramallo looking out for me. It's okay that I can't do the things that I can't do, because none of us can do it all. If you can give that message to your kids and practice that message within your school, within your family - you will allow children to become the best they can become. Not just in terms of achievement, but in terms of development of the soul, in terms of being a hero in life, being who they ought to be.

CHAPTER TEN

Paying Attention To Attention: The Connection Between Attention and Learning

GERARD A. BALLANCO, M.D., FAAP
Pediatrician
Rochschild-Ochsner Pediatric Group
Metairie, Louisiana

"The gods distinguish what they give to each,
not form nor judgment, nor persuasive speech
set before all men in equal reach." - Homer

Homer said this four-thousand years ago and we continue to address the question of diversity every day.The tasks of teaching and parenting are much the same yet importantly different in each school and each family. To do them best requires a variety of approaches that suit the temperament and diversity of different children as well as the unique characteristics of these widely different complimentary institutions. Even the "disorders" of ADD, ADHD are variable in presentation in individual children based on concurrent strengths, family and culture, and co-occurring difficulties.

Children may demonstrate overactivity, impulsivity, and/or inappropriate attention focus, the classic triad of ADHD. Overactive children strain the mental resources of even the most patient adults but overactivity is not dystonic to the child; impulsive behavior is aggravating to adults and peers alike and cause a child to get into many unpleasant and unforeseen situations; poor attention focus is a source of great aggravation to parents and child, and a frustrating mystery to teachers.

Losing things

All people occasionally forget and lose things. All kids lose things, but these kids lose almost everything. Bob Brooks talks about the black hole that exists between homework and school; there really is a black hole. Parents say, "I put it in the school bag," and the teacher says, "I looked for it in the school bag and it's gone." I don't know what happens to those things. I know in my own life that hammers can disappear into vapor.While working, I put a hammer right next to me; when needed again, I search for it and it's gone. This happens to all of us and it's very frustrating. And these kids are living with that frustration all the while.This calls for empathy, not anger.The stuff that he/she does and the things that get lost chronically aggravate the child. If you think that you get upset that their homework didn't get turned in, how upset do you think they get? They get very upset. So when you ask them for their homework and they snap at you, they're coming at it with a little bit of an edge already. Try to be patient with that. It doesn't mean back off and allow the child to be offensive; but try to be patient and understand why the child is so impatient when you talk about lost homework.

Distractibility and focus

Distractibility is a form of improper focus. For example, I may speak one-on-one with a youngster who has an attention problem. He usually sits four feet away from me; while talking with him, we have good eye contact. When I finish a point and ask for input, he may say, "Is that the air-conditioner making that noise?" He is very easily distracted with loss of focus by many trivial events. Somewhere the child just kind of drifted off into no man's land. The real difficulty here is that unless the student knows that he has drifted off, he cannot call himself back. That is the real lesson, the child does not know that he has stopped paying attention; whatever happens in the class is lost to him.

Some children hyper-focus. They root down on something and if you try to pull them away from it, it's like pulling their teeth out. It's hard for them to change direction or recognize the need to change activity level or quality. Thus, transitions are another area of difficulty, especially with little children. These are the children who can't calm down when they come in from recess; they just continue to go. The same transitional roughness occurs going from English to reading, reading to math, and so on. They have a hard time making the change. Learn to watch children who are having or causing trouble to see if transitions are the trigger for their offenses. It's often part of a constellation of symptoms related to attentional difficulty.

Overactivity

(Far Side slide: " Saturday morning in the cockroaches' household") "I can't handle it anymore, Ed. The kids are everywhere in the kitchen, running on the floor, across the counter, behind the frig, under the stove. In a moment I'm going to start smashing them myself." This is the way most people perceive children who are overactive. Their behavior is very frantic. They're into things, they're out of things. They're in, they're out, constantly moving without apparent direction. In the classroom this level of activity is very obvious. On the playground it may not be so obvious, unless the child has social skills problems. The recent trend to reduce recess time to meet curriculum requirements may cause trouble to children with a special need to move; it doesn't seem a boon to any child.

The parents will say, "At home he can watch TV for hours and it doesn't seem to bother him." TV cures attention trouble; so does Nintendo. It just disappears when the kids are doing these quickly changing, instantly rewarding activities. Even more exasperating is the fact that, often, if the youngster initiates the activity, he doesn't have any problem paying attention to it. The time he has the most trouble is when someone else initiates the activity.

(Slide of Calvin) "Look, it's almost eleven o'clock. Wow. The last two hours really flew by. I hope the teacher didn't say anything important." This loss of contact with the environment is characteristic of kids who have ADD, the non-overactive form of attention problems. It's very much like impulsiveness and easy distractibility, it happens without warning or deliberate input from the child.

If a person with a typical pattern of inability to process information goes to a lecture or sits in a classroom and finds that concentrating is a problem because of content or presentation style, he/she can think: "I've got a test on this stuff coming up Friday. I need to pay attention." So what does this typical person do? He may sit on his legs, take notes, shift weight, contort into all uncomfortable positions; the effort is to do something to try to wake up, to try to become more alert. In order to do that, the individual must realize that he has tuned out. Too often what happens to children who have primary attention problems is that they are not aware that they are tuned out. They are mentally gone and they don't know it, so compensatory strategies are not employed.

If you ask the child who is past fourth grade at the end of the class, "Were you listening?" the child will say "No." Prior to that grade, you may get a less candid response. A child without a primary attention problem may be so uninterested in a subject, perhaps from depression, that the same thing may happen. In children with attention deficits, this loss of contact with a less than stimulating environment happens very frequently and in many different arenas.

(Far Side slide) This slide depicts an Indian on a plain, looking for a buffalo. The buffalo is in the only tree within sight, looking down on the Indian. This has to do with the point of focus. Children with attention problems do focus. But they focus on the wrong stuff. There was a beautiful cartoon in the paper the other day about a family with a 5-year-old child. The child came home and said, "Oh, John was wearing his blue coat and Ann was wearing a green dress and the teacher dropped the red paint and it caused trouble and at lunch time Paul fell and broke his toe and Tommy had a band-aid and he gave it to him." His mother leaned over to the daddy and says, "The teacher says he's having trouble paying attention." And the daddy says, "To what?" He had observed everything in the class that had gone on except the lesson.

Impulsiveness

(Calvin and Hobbs slide) "Sometimes when I'm talking, my words can't keep up with my thoughts. I wonder why we can think faster than we speak." Hobbs answers, "Probably so we can think twice." This relates exactly with the impulsiveness that many children have. One Monday morning I went into an exam room to see a child, a six-year-old boy that I'd known since he was a baby, and his mama. He was sitting on one side of the room with his arms folded and his mama was sitting on the other side of the room with her arms folded. He takes Ritalin, a medication to help with overactive, impulsive behavior, on an almost daily basis. Sometimes he misses. It turned out that on Sunday morning, the day before they came in, the family was going to church. He had his suit on and his four-year-old sister had a new dress on. Unfortunately, they came across a puddle... he jumped in the puddle.

I looked at him and said, "Why did you jump in the puddle?" And he said, "I didn't think about it...until I was in the air." That's really what happens. When something that is exciting comes up, the impulses hit and the child doesn't think about what he is doing. And it's not because the child doesn't want to think about what he is doing. It's because the requisite monitoring step does not appear to the proper monitoring system.

CHAPTER TEN

Try to remember from Biology the stimulus-response concept. That theory stated that if a stimulus were presented to an organism, there would be a specific, predictable response. And then somebody said, "No, you have to put the organism in there because of innate variability (diversity) of organisms." So now, the concept was expanded to stimulus- organism-response. What would be more appropriate is stimulus- neuro-pathway-organism- response. If an individual does not have a reliable neuro-pathway going to the brain's editorial board, there will be no opportunity to think about the response. If an individual does not have the opportunity to think about what he is doing, the reaction will be thoughtless or impulsive. You react to the stimulus. You don't monitor it; you simply react.

Identifying a child in trouble

Young children who have attention but no activity-control troubles are usually not identified during Pre-K, kindergarten, or first grades. Unless the attention problem is severe, underline the word severe, or is accompanied by a learning or mood problem, the child's difficulty will usually go unrecognized. Part of the reason for that has to do with the teaching styles that occur during those grades. Teachers walk around the class, they do a lot of hands-on activities, there's a lot of experiential work, they involve the kids, sing songs, give them breaks, snacks, and naps. There are many fun-filled and motion-filled activities. Additionally, many of the teachers who go into early education are these energetic, enthusiastic, animated (possibly overactive) people with gobs of ideas and effort to have fun teaching. So, not only do they allow movement and activity in their class, they encourage it. They infuse the class with this sense of activity and experience, which children with attention problems thrive on. So very often you don't notice it. Recently, with the intrusive curriculum changes, many teachers are experiencing increasing pressure to spend more time on curriculum issues and less time on teaching the love of learning. The opportunity to play and encourage is harder to find.

People are more tolerant of inattentive, young children. There is an expectation of easy distractibility and "space cadet" ways. After the third grade, greater focus is anticipated. They should be able to do better.

Inattentiveness and a tendency to be impulsive can be hidden by strengths. The student plods along, struggling. It's not until the person gets into a situation that the strengths are overwhelmed that an outsider begins to notice that problems are present. Meanwhile the child has suspected all along that there is something wrong with him. For years the child has been worried that somebody is going to find out that he is not quite right. It is very scary to kind of hide that information and, sometimes, the result is inappropriate behavior and poor self-esteem.

The Great Wall of China is usually the seventh grade; only exceptional individuals with attention problems get past this hurdle. In some schools, the fifth grade is the grade that attention problems compromise academic success. Those of you who were in the panel discussion with Ed Hallowell heard him discuss that he was diagnosed with ADD in his junior year of medical school, highlighting that strengths can make attention problems hard to identify.

As and Bs are normal during the first two years of school. Cs are not normal. Cs are not average. If your child or a child in the first or second grade is getting Cs, there is a problem with the way that youngster learns. He may have an attention problem. But that's not why he's having trouble learning. He's having trouble learning because the material just doesn't make sense to him and he's not able to put it together. Isolated attention problems are not usually responsible for learning difficulty in the early grades. Parents and teachers: don't delay, address the struggling child's needs because his academics are going to be much more problematic the longer the wait before the issue is addressed.

A child with fairly pure form of ADHD (overactive ADD) typically repeats the same transgressions over and over. Every time the child does it, he's sorry. And he really is sorry, but he didn't think about it before he did it, so he did it, got caught, then thinks about it, and is remorseful. Ten minutes later, he does the exact same thing. It's because the child is not previewing (Remember the neural pathway for impulsive behavior that we spoke of earlier).

Early in his career, the child is remorseful. The child is really sorry that he messed up again. When the child gets in trouble repeatedly and he gets in your face about it, there is a potentially explosive dynamic developing. From age eleven through teen years, the child may be apparently not remorseful as a face-saving ploy. These two oppositional situations need to be distinguished.

Usually a child with ADHD is very likable. You want to hug the child half the time and strangle him the other half. Often the face of mischief is present; perhaps it's that the child needs a lot of stimulation to maintain balance. A certain amount of mischief is usually admired by adults, but too much becomes a problem. Some children with ADHD are the class leaders socially; others seem to have trouble with personal space and with touching and annoying other children. Overactivity may be funny for a while, but frequently the child will become socially isolated and will play only with those who possess many of the same traits. This "rat pack" is often watched with many an unforgiving eye by school authorities.

What may happen with late identification?

If the child is not identified early in the academic career, something bad happens. The important cumulative information that should have been gathering since the early grades is very unreliable. The Louisiana Delta used to be a nearly solid land mass. Salt-water incursion, from canals dug by various industries, has caused the solid landmasses to virtually disappear so that the delta now looks like Swiss cheese. That is very similar to these students' grasp of academic information. It is densely packed with lacuna. They know some things, but they don't know the connecting and supporting parts; their information is, often, many isolated facts, without connecting bridges. There are little chunks or islands of things that they know, but also a lot of facts and relationships between information that they really don't know. The result is that even when the problem with the attention is effectively addressed, there is a significant deficit of what the child did not learn along the way.

If the child suspects that there's something wrong with him he usually decides he is not smart or just bad and good for nothing. This sometimes causes a loss of self-esteem and/or depression. What too often happens is that the children become oppositional. They avoid school and everything associated with school, and they engage in self-destructive behaviors.

CHAPTER TEN

Some children's behavior indicates significant trouble. Those who manifest oppositional, "in your face" behavior are frequently on the edge of disaster. Some children focus only on their own personal agendas. They will do what they want, and if you let them do what they want, they'll just rock along just beautifully as can be. But cross this child, and there are fires and sparks. That's a youngster in trouble. Some children will overrun the personal space of others, but if anybody dares encroach on theirs, they end up with a fist in their stomach. These are kids in trouble. They are the children who are absolutely without remorse - very troubled kids. There are so many things that can be responsible for any or all of these behaviors that they cannot be addressed here other than to say that when you see this sort of problem in your classroom or in your home or with the child that you're dealing with, see that he gets the help of a mental health professional. Someone with experience and expertise in childhood behavior needs to be watching the children in these groups, because these may be signs of serious trouble.

Management, general

Often, when talking to the parents of children who have attention problems, I'll notice one spouse is looking at the other in a rather strange way. Pretty soon, the other is looking at the first one with a very knowing glance. It's almost uncanny how often more than one of the family members has an attention problem. It's good and bad. It's good because it means that there's certainly empathy. One person, one of the parents, understands this kid and can identify with the frustrations that he's going through. Usually the spouse of that person has found something in this kind of behavior or this approach to the world that is attractive. So you've got people that are kind of nurturing to this youngster. But it's also problematic because, as teachers or mental health professionals, when you're dealing with parents some of these impulsive, disorganized, inattentive, poor-follow-through behaviors show up.

You have to keep in mind to use a strategy that this person is going to be able to respond to and try to not become too frustrated if they don't follow your thoughts or advice. As Bob Brooks suggested, try to find what works. It is more trouble, it is more effort; but it's wonderfully rewarding.

This is not a discussion about medication, but one point is necessary. It should be obvious from the preceding discussions that children with attention problems often process input in a different manner than most of us. There's something very different about the way these brains manage themselves and interact with the environment. Stimulant medicines basically give the child the option of making decisions. It makes their brain more like a typical brain rather than one in which information is being routed in unusual paths. Medication is useful and safe, but its use is not always appropriate and it requires professional monitoring.

The key word for help is management. That is the job: management. We do not "cure" the way a child acts; we help the person to deal with the areas that are problematic. The first goal for parents and the teacher is to identify the areas that are causing trouble. Describe the behavior as best you possibly can. What is the overactive behavior that he's doing? There's a great difference between an overactive child who's kind of wiggling in his desk and the one who gets up and starts throwing things across the classroom; there's a big difference in the management.

Some children will describe sitting on their hands and thinking, "I can't get up, I can't get up, I can't up." Well, that child may be in the classroom, but he's not going to learn anything because he's concentrating on controlling himself, not on getting information. Perhaps some permitted movement is appropriate.

A few years ago, a group of teachers told me that one of the things they did to help children who were overactive in their classroom was to give them permission to move. As a matter of fact, all the kids in the room had permission to move around the class. The rule was you could only bring one book and one pencil and you couldn't touch anybody or talk to anybody. After this rule was put in place, there was a fair amount of movement the first couple of days. After that, the movement calmed down to almost a standstill. It's as if giving the youngster permission to move freed him from the need to.

Another suggestion is to allow the child to stand next to his desk. A qualifier might be that the child must have some part of him touching the desk. I can imagine some students stretching this a little bit. That's just because that's the way they are. But again, once the permission is there for the youngster to stand up, it's utilized not very much.

Children need breaks. There are a couple of schools in this area that don't have recess. This does not seem to be a good idea in the scheme of school functions to meet the full educational needs of children. They need recess.

Children with attention problems usually need more help than other youngsters to manage themselves in the classroom. If a classroom has twenty-children, there should be two, maybe three children in the class who have attention problems. Give jobs to those kids, but not exclusively. Try to not single out this child as being so unusual that he's getting all these extras. That perception will lead to resentment by the other students. What you do for one, do for all, and what you'll find is that the whole class functions better. Go out of your way to identify special skills or attributes of each student. Identification and development of strengths is a priority.

Bending the school into knots to accommodate special needs may not be appropriate, but reasonable accommodations should be made available. I once had a patient whose single problem was that, when he finished his test or seatwork (usually correctly), he got restless and started wanting to move around, sharpen his pencil, and kick his feet. His parents asked, "Well, why don't you give him something to do after he finishes?" The principal said, "That's not part of our curriculum plan. He needs to learn to control himself." I suggested they take the child out of the school. I would like to suggest that they close the school down.

Management for impulsiveness

Punishment doesn't work, and the reason it doesn't work is because the kids are not previewing what they're supposed to not do. They don't think before acting. They can be punished over and over for the same things. This becomes very frustrating for all involved.

What can you do? Give physical reminders. Teachers will sometimes start the very beginning of the year saying, "I'm going to ask a question and I'm going to hold my hand up and I'm going to wave it while I'm asking the question. And then when I put my hand down, you can raise yours." This bypasses the circuit of having the child remember that the rule is "You Wait". This is called "over-learning"; it is the creation of a habit. The raised hand means you've got to raise your hand when the teacher stops talking. You can't do it for the first ten days of school and never do it again. It has to be continuously reinforced. But it helps tremendously with impulsive kids and with kids who are blurting out because they are impulsive. It does not help with the kids who are blurting out because they are being oppositional.

Verbal cues are the same thing. At the very beginning of the term say, "I'm going to ask a question, but don't anybody give me the answer until I tell you to do so." Halfway through the question you say, "Now remember, don't answer until I tell you to do so." Those reminders, given again and again, help create a habit.

Let's use the example of a child slamming the door. The youngster goes outside and slams the door. So you retrieve the offending person, bring him back and say, "I know you're trying to remember to not slam the door, and I'm going to try to help you remember that." This is not negative. It's at the very worst - neutral. "I want you to open the door, step out, and close the door quietly five times." When the child has done it five times, you give him a big hug, you send him on his way, and he slams the door. So the next time that happens, you do the same thing. What will happen, eventually, is the creation of a habit. Habits don't require monitoring. Habits are automatic. You have to think to break a habit; it assumes almost reflex character. You create new neurologic paths in this child's brain. When the door opens, the synapse closes and it says, "Step lightly." It happens automatically.

Those of you who type remember there was a time when you had to concentrate very vigorously on every finger movement. With practice you really didn't have to think so hard, and it got to the point that your fingers almost took on a will and mind of their own. You didn't even have to look at the board. Your fingers told you if you made a mistake. All of those are newly developed nerve pathways.

If you help the child to develop new nerve pathways regarding classroom rules, the child has a more successful time. But it takes patience, reinforcement, encouragement, and identification of the behavior that you're trying to deal with. Obviously, raising your hand like this as a signal to don't blurt out is not going to help a child who, if he hears a noise, is going to look at it. It has to be handled individually, based on what the presenting concerns are. Routine is nice for children who are impulsive, but for those who have a need for high stimulation, it is murder. Both children are in most classes; balance is the key to sanity.

Natural and logical consequences need to occur. In your classroom, if one child is allowed to get away with murder, then you're going to have a whole horde of murderers on your hands. They understand fair. They don't understand and they don't tolerate over vigorous punishment. If the punishment is appropriate for the offense, most people will say, "I deserved it." If it gets to be too severe, then you start running into oppositionality. "I didn't deserve that and I'm going to get you back for it." If the child thinks you're not being fair, he is going to "get you back" one way or the other. Frequently, they do so by hurting themselves.

Management for inattention

A child who is inattentive is listening to the music of his own soul. He is in the classroom following the ideas that flow from something that you said or the light that came through the window or the flakes of dust that happened to land on his desk. Those are the stimuli that trigger this child's thought pattern and you're trying to compete with that.

Promoting student interest is an uphill battle. Some of the material that we teach is boring and of no apparent relevance. If it's boring, students who need a lot of novelty and stimulation to be mentally alert are gone. You have a hard time getting them back once they've drifted off; and, as they get older, they become quite expert at looking you right in the eye, appearing to be very focused on the topic. They're not anywhere near your topic, but they sure look like it. They look exactly like it.

So what do you need to do? For these kids, you need novelty. They'll burn out with repetition. Many children say, "I could do the first eight problems on the homework; or I could do the first eight problems on the test." But when there are twenty of them, they just don't care anymore. The repetition burns them out. The mental energy is gone. An interesting thing is if you put four problems on one page and when the child is finished with it, they go get another page, they don't burn out as fast. It doesn't work if the problems are just on different pages. The student has to be able to give you that page and get another one. It's insane, but it is often helpful. If that's all it takes, my thought is it's something you ought to investigate trying to do.

If you tap into the affinities of people who have attention problems, it's a lot easier to hold their attention. If the child loves animals, then you make a lot of animal examples. When he hears the word "animal" or "dog," he will often come back from wherever he was and start listening to you... at least for a few minutes. Even if you're just talking about animal as the subject of a sentence, at least you've got his attention by talking about something that he naturally perks up about. Take advantage of any affinity that you can find. If he must write ten sentences, tell him to write about animals. It doesn't matter. Find something that he likes because he is much more likely to try to cooperate. These children are not trying to be a pain in the neck. They really are trying to get by with what they have. What they have trouble with is paying attention, and they are trying to manage it. Our job is to help them and give them tools.

Multi-sensory, fun, and experiential teaching works for everybody. Most people can learn with a lecture-listen format, but we all learn much better with interactive teaching, cooperative learning, and hands on methods. Whenever possible, have the children be active thinkers and doers; lessons are learned much more deeply.

Management for organization

At times it seems that the biggest problems that families deal with is getting the proper homework materials and assignments home. This seems like an inappropriate battleground. College professors give a syllabus at the beginning of the year. The syllabus has the pages to be covered, the problems to be worked, and the dates of tests; everything's on there. If you can give that to a college kid, why can't you give it to somebody in the first grade and the second grade? It doesn't have to be for a year; a week or two is fine.

If the goal is to teach organizational skills...fine. Teach him how to organize. Make that the homework. Give the kid a pile of leaves and say, "Organize these for me." It's amazing what you'll find. Some will organize them with the big leaves and the little leaves, or there'll be skinny leaves or there'll be leaves that are broken or leaves that aren't broken. There are leaves that are colored and leaves that aren't colored. There are all kinds of different organizational strategies. It gives you a perfect entrée to begin to discuss the idea of organization. Betty Edwards, an excellent art teacher, spoke here two years ago and she was screaming with frustration at the way teaching is often done. Her point: If you want to teach people memory, don't teach them Latin, teach them memory. Teach them how memory works, then introduce the situations in which it will prove to be a helpful skill.

If you know that a student has a problem copying the homework, help him to figure out what the problem is. If the problem is not enough time, deal with it; if the child doesn't care, try to find out what it takes for him to care; if he loses stuff, assist in organizational strategies. Don't punish the child and his parents. Help the child.

Many effective techniques have been used successfully. A phone number with an answer machine that has the homework for that night and upcoming projects is the strategy that one school uses. So when the child loses the homework, at least the mama knows who to call. And if you send home enough pieces of paper with that phone number on it, the mama's going to get one and she'll recognize that she can use this as a way to get the homework for that night. Email is another strategy.

The buddy system works very well. NCR paper is basically carbonless carbon paper. You write on one page and it copies onto the other. This is a good way of pairing students together for social/cooperative efforts. Often, if you give child "A" the responsibility for Monday, child "B" the responsibility for Tuesday, and child "A" responsibility for Wednesday, switching back and forth, the child considers it a job and a responsibility. He's not only doing it for himself, he's doing it for his buddy, so he's more likely to try to comply and do what he's supposed to do.

Involve the child. If you just say to a student, "This is what you're going to do to be organized", you are not likely to be successful. (1) State the problem: "Look, you're having trouble getting your homework assignments home. You're having trouble getting your books home. (2) Ask for solutions: "What are you going to do about this?" The child may say, "I'm going to remember to do better." Then you go down to the next line where it says (3) Establishing monitoring parameters. And you say, "Okay, what does better mean?" And the youngster says, "Well, I'm going to get all my books home for the whole week." And you say, "Okay. How are we going to monitor whether you've got your books home for the whole week?" So you go through the whole system with the youngsters so everybody knows what all the rules are. Then you ask the youngster (4) Contingency plan: "What are we going to do if this doesn't work?" You're putting him on the spot and including him in what's happening to and for him.

If he fails at his task, your suggestion may be that he bring home all of his books for two weeks, even if that involves two backpacks. This is usually an effective strategy to help the student remember what to bring home (another example of over-learning). I have a wonderful cartoon of a schoolboy lying on his backpack with his feet sticking up in the air like an overturned turtle. It's amazing how many books kids bring home nowadays. But the point is, involve the child.

Many people have trouble with multiple part instructions such as "circle the noun and underline the verb". Children with attention problems tend to have special trouble with these kinds of organizational skills. You're almost guaranteeing the student fifty percent wrong unless you somehow highlight the fact that he must do two things on the same sentence. One teacher approaches this by saying, "What you're supposed to do with this sentence is circle the nouns and underline the verbs. But while we're getting started what I want you to do is just circle the first noun. The first noun you come to in each sentence, circle." Wait, then she says, "Okay, has everybody gotten that?" What is she doing? Being novel ... moving and changing the task. Then, "Now, look for the second noun in the sentence." This helps with the instructions, keeps interest, and teaches that a sentence may have more than one noun in it. Many students don't think about that. Then you go back and get the verb. You break it down into little bitty pieces. You make it manageable. You're teaching.

Learning Problems

We're going to switch now and talk about the child with learning problems. From the point of view of management, it's a much more difficult area to approach. It is much more difficult because the variations are so significant. Children who have attention problems are not stereotyped little automatons, but they're much more similar than they are dissimilar in the patterns of problems that present. And there's always this discussion: Is it a variation? Is it a difference? Is it a disability? It's not a small discussion.

Let me again remind you that, as regular classroom teachers or parents, it's not your job to fix these things. It's your job to manage them. To repeat again and again, management starts with identification. You've got to be able to spot these youngsters.

Multiple intelligence theory, diversity again

The development and publication of the theories of multiple intelligences have made teaching and education so much more fun, because now it's okay to be a really great dancer. We now recognize that kinesthetics is a form of intelligence. I've not seen anybody yet stretched to the point that they call a really good golfer intelligent, but yet, it's not much of a stretch. Each sport, language skill, interpersonal skill, ability to work with mechanics, space and time requires some special skills; these are the multiple intelligences.

Yet all of us, most of us, have a very uneven profile of what we do well and what we do poorly. The "unfortunate" thing, I think it's more fortunate than unfortunate, is that there are a lot of us that have these great big gaps in information processing to the point that some people, if shown a movie, drop off immediately; but, if you talk to them, they do great. The opposite is also true. Sometimes people will really brighten up with pictures, but they can't process words.

It is extremely important to always keep in mind that these individuals who learn so differently are in each classroom. To reach them all, you may have to present the same information in different formats. One of the slides I saw at an International Dyslexia Society meeting was a slide of a seal, a monkey, a bird, a goldfish, and a kid. There was a tree in the background. The teacher was sitting at her desk and she said, "Okay, today's test is to climb the tree. The one who can climb the tree the best gets the best grade." Well, the seal and the goldfish are at a distinct disadvantage. Some children learn so differently that this cartoon is not that far fetched. Material presented in a poorly processed format just doesn't connect. As a classroom teacher, if you have a child with that level of inability to learn with the usual classroom techniques, he will not learn in your class unless you can find some way to reach him using an alternative path.

Look for ways to find out what the student knows and how best to teach the individuals.

This doesn't mean that you have to spend your entire time addressing the needs of this one child. But it does mean that his disabilities need to be addressed and compensated for in at least something that you do in every part of that class. If you are teaching the concept of justice and you know that one student does not relate well to lecture or written words, use pictures of the scales of justice, workers being paid, police and jails, and people helping each other. Have the students present stories of these pictures that relate to justice. Ask what other pictures should be shown.

There are some people who have what we call an expressive writing disorder. You know these children. When they speak, they can speak eloquently. They'll use adjectives, and very complex, imbedded phrases. When they write (first of all, they hate to write), but when they write, instead of saying, "I went to the beach and what a gorgeous day it was. There were birds in the air. The sky was blue and the crashing sea made a sound that just made me smile." They'll write, "We went to the beach. It was fun. The end." When you see this glaring disparity between what the child says and what the child writes, something ought to go off in your brain. If you're going to find out what this child knows, if you really want to test him to find out whether or not what you are teaching is getting into him, then you can't ask him to write the answer. You're asking him to do something he can't do. He can't tell you in writing what he knows. You have to ask him to answer orally, to do a project, or to paint a picture.

The same thing is true if you have a child in your class who can't read well. Very often, by the time you all get him in the upper grades, he's with reading resource and identified as someone who has reading trouble. If all of the questions on the test are written, you may not be testing what the child knows. You might be testing the severity of his disability. And that's not what he should be graded on. It's very hard as a teacher to get in the principal's face and say, "I'm not going to grade this kid solely on what he can read. I want to grade him on what he knows. Yes, he has to read, but I'm going to grade him on what he knows, not on what he can't read." So you don't give him a complete bye, but you don't test his disability. Give him an oral test.

Emotional IQ

The concept of Emotional IQ is an extension of multiple intelligences. Read this book; the first half of it is fun, the second half is the same as the first half. But what it basically says is that there are a lot of people in this world who are brilliant with other human beings. They start off when they're little and they seem to be successful no matter what. Those children who are not skilled in dealing with other children have a less brightly predicted future. Goldman talks about the fact that you can teach people empathy. You really can, and as teachers, even though you may not have a curriculum for it, you can certainly model it. When you come across a story, you can certainly talk about all the feelings in that story. You are going to find some kids who'll look at you with this very blank look, and you know you're going to have some extra work to do with that youngster when it comes to feelings and dealing with other human beings.

Speech therapy in the present or past is a warning to be careful.

In reviewing the history that moves with a child from grade to grade, if you see that this child went to or goes to speech therapy or was in reading resource, all of the alarms should go off, the antenna should go up, and the monitoring system put in place, because this youngster is at a very, very high risk to have serious problems with reading and with information that comes to him in the form of language. Younger children frequently mix up sounds and symbols. By the end of the first grade, almost everybody can write letters just like they're supposed to; some may be reversed. But, in the third grade, if you see a child still confusing ds and bs and ps and qs, it's a real problem. Unless the child has some amazing strengths to compensate for the difficulties associated with these kinds of errors, he has trouble. The letter confusion and seeing backwards is not the problem, the poor ability to associate a symbol, the letter, with its appropriate sound is the problem.

It's amazing that some children will get A's on a spelling test and they spell the same words in a sentence incorrectly. It's because they really don't know the sounds in that word. They have memorized the letter sequences. They aren't learning how to spell. They will forget the correct spelling, completely, in a month.

The pitfalls of memorizing

Often a parent will tell you, "I don't understand it. He knew everything last night. Everything that I asked him, he knew." If you look more closely what you usually find is that they memorized all the answers. The words that they used in their answers are the same ones that the teacher used in her explanation. There's no active processing of information at all.

When you're talking to parents about working with kids doing homework, ask the parent to have the child relay that piece of information in his own words, and if you really want to expand it, ask him, "What is that like?" Make a metaphor. Draw me a picture of this piece of information. Tell me something else that this could be. Then you have true learning going on.

Often a child learns George Washington was the first President of the United States, and if you ask, "Who was George Washington?" the child will nail it. But if you ask, "Who was the President before John Adams?" the student is stymied. He didn't learn it like that. Teachers may call out the spelling words in the wrong order, and that confuses the kids because they've learned them in just one order. If a child can't spell words dictated in jumbled order from the order on the spelling list, that child has a problem with the sounds within words, not a problem of a lack of study.

Slow processing

Sometimes we see a subtle, but serious, processing problem in which the rate of processing of oral language is slower than that necessary for efficient processing. You are on to the next sentence and the youngster is still trying to figure out what you just said. They usually don't catch up until you're now two or three sentences down the road. They are basically, chronically behind. And they don't understand. These are the kids that are obviously trying to pay attention, but they're almost always lost. They just cannot keep up with what's going on. Eventually they get tired and discouraged and quit. Then they become inattentive.

How is this identified? Do an experiment. Address that child in a small group at a normal rate and then ask the child, individually, to tell you what you just said. Do the same thing more slowly, or with a child who has problems with processing words, use a picture accompanying one, and see if he learns the information better that way. This is hypothesis testing. It's hard for teachers to do because it takes extra time, but what a reward if you can learn the key to help a child learn. If you think that the youngster is too slow to process information, try to isolate that child one-on-one and give him the information at a slower pace and see if he can retain it better. Or show it with a picture or ask him to explain the picture in words to see if he gets the information better. That will help you understand how to teach this child and make the material more understood by many other children, because alternative methods help all learners.

Later grammar school

The next few issues show up in the fifth grade and above, although the roots are present in younger children, but less noticeable. The first is lack of flexibility in problem-solving, implying rigid thinking. This very often shows up in math problems. The child learns one way of doing something; then you ask him to do it a little bit differently. Even though it's the same or closely related function, he can't do it (5x7=35; 7x5=35; 35÷7=5).

A way to look at this in a child who has reasonable language skills is to give the student an ambiguous sentence. One of the sentences on Mel Levine's test is: "He fed her dog biscuits." Tell me two things that sentence could mean. A child who has good language processing skills and good flexibility in thinking will say, "He fed his sister dog biscuits, or he fed his sister's dog biscuits, or he fed her dog, which was named Biscuit." There are several options. A less flexible child may say, "He fed his neighbor's dog biscuits." And you say, "Sure, could it mean anything else?" And the child responds, "No, that's all it could mean." Very often those children are extremely concrete in the way they think. They're very rigid in their rules. These are the ones who really balk and falter if you do something a little bit differently on a test.

One of my patients used to drive an old beat up Plymouth. This is going back a thousand years. She drove her parents' Cadillac to the office one day. I saw her drive up in a Cadillac and I said, "How'd you rate the Cadillac?" She got a perplexed look on her face and said, "Well, it's better than the Plymouth." I had to think for a minute to figure out what she was answering, because she didn't know that "rate" meant what did you do to get to drive the Cadillac. She missed it completely.

When such an individual is presented with the need to be flexible in problem solving, there is a problem. "What else could you do besides punch Tommy in the mouth when he bumped into you in line?" "I could have hit him in the stomach." That's not very flexible thinking. Fortunately, this is something that teachers and parents can teach. You can teach alternative things, alternative ways. And you do this by having fun. You might ask, "What are the wildest ways we can fill up this room with ping pong balls?" And you will get some wild ways, and the children hearing each other's suggestions will begin, just as with organization, to draw from each other and learn some parallel skills. Different approaches to situations can be elicited, even without "solving" the problems.

Use of inference is something that, as adults, is an extremely important thing. Some children just don't know that you're even supposed to look for non-explicit information. If you didn't mention it explicitly, the children very often don't consider that there may be symbolism or a need to look for information not laid out in dark bold letters. These children are cursed to be very superficial in their ponderings.

CHAPTER TEN

A major loss to a child with trouble learning is the lack of pleasure in learning that occurs when a child has to struggle too hard and too long to learn. He has a ceiling to his life, a concrete ceiling. Not glass. This is concrete. You have to love to learn if you're going to make progress in your life, and if the child is struggling the whole time he's learning, he's not going to love to learn. It is very important to help the child find areas of competence and help him to develop. The success feeds the emerging roots of human development and repeated failure suffocates them. Success in learning is a critically important component of life.

Some children have rather complex learning problems with different facets. Effective learning is a mixture of so many things. You must be able to pay attention. You must be able to remember what you paid attention to. You have to know the language and be able to understand it. What other factors are interacting? Is there a construction company drilling outside of the classroom? Is the speaker in the next room talking louder than you are? Are your parents fighting? There's a critical balance. If you have a little bit of an attention problem, you can compensate for it if you have a compensating strength in language, and/or memory. You may compensate for a problem with language if you have a powerful ability to pay attention or a wonderful memory. As material becomes more complex, there may come a point at which you can't do that anymore. Some people quit school, but go on to do quite well. Some tough it out, some quit.

The interactive processes of attention, memory, and language are really the heart of the whole learning/attention difficulty business, a lethal loop. It is like Martha Reid's Bermuda Triangle of Learning. If you have inadequate attention, if you have poor understanding, you won't remember the information. Or you didn't understand it because of language problems or you have low interest, and the attention goes and remembering is unlikely. What happens if you don't focus very well on what's being said or on what you're trying to learn? You don't register it well in memory. That means you have to work harder to retrieve it. When you work harder to retrieve it, you don't have as much mental energy to learn, and so it becomes harder to pay attention.

If anywhere in the process of learning you fall on your face, you're going to end up having trouble paying attention and remembering. The take-home message is that when you fill out behavior rating scales, and it suggests that the child is not paying attention, you're probably describing very accurately what's going on, because he's not paying attention. The important thing is to look beyond that and ask, "Why is he not paying attention?" Is he not paying attention because he can't learn this stuff? If I were talking in Japanese, I would have lost you all much faster than I did. That's just the way it happens. You have to understand. You have to be able to remember, and you have to be able to relate it.

Who is responsible?

I want to put this as a challenge to teachers to bring back to their schools, because when you identify a kid who is in trouble, so often what happens is the Governor's dance. Any of you who saw "The Best Little Whorehouse in Texas" must remember a wonderful scene where a reporter asked the governor a question, and he would dance to the side and avoid the question while singing. More questions, more side-stepping dancing. Nobody accepts responsibility. Make it your business, as this child's teacher, to make sure that someone in that school is responsible for this child's getting the attention and help that he needs. Make it your responsibility to make sure that your student is protected from humiliation in your class. And then make sure the people whose responsibility it's supposed to be do their jobs. Stay on their case. Be a bug in their ear. Just get it done, because if you don't, the chances are it's going to be put off. That's why we teach. That's why we work with children. "Every time you impact a child," as Bob Brooks said this morning, "you are starting a process that is going to reverberate through this child's entire life." Every day you impact that child positively you make him stronger. Hopefully one day he'll be a free swimming, very pleasant, wonderful person.

C H A P T E R E L E V E N

READING DEVELOPMENT, READING DISORDERS, AND READING INSTRUCTION: CONTRIBUTIONS FROM RESEARCH

G. REID LYON, PH.D.
Chief, Child Development and Behavioral Branch
National Institute of Child Health And Human Development
National Institutes of Health

Introduction:

Luckily, some children learn to read and write with ease. Even before they enter school, they have developed an understanding that the letters on a page can be sounded out to make words, and some preschool children can even read words correctly that they have never seen before and comprehend what they have read. As Marilyn Adams (1990) has reported, before school, and without any great effort or pressure on the part of their parents, they pick up books, pencils, and paper, and they are on their way, almost as though by magic.

However, the magic of this effortless journey into the world of reading is available to only about 5% of our nation's children. It is suggested in the research literature that another 20% to 30% learn to read relatively easily once exposed to formal instruction, and it seems that youngsters in this group learn to read in any classroom, with any instructional emphasis (Snow, Burns, & Griffin, 1998).

Unfortunately, it appears that for about 60% of our nation's children, learning to read is a much more formidable challenge. For at least 20% to 30% of these youngsters, reading is one of the most difficult tasks that they will have to master throughout their schooling (Shaywitz, 1997; Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992; Shaywitz, Shaywitz, Fletcher, & Escobar, 1990). Why is this so unfortunate? Simply because if you do not learn to read and you live in America, you do not make it in life. Consider that reading skill serves as the major avenue to learning about other people, about history and social studies, the language arts, science, mathematics, and the other content subjects that must be mastered in school. When children do not learn to read, their general knowledge, their spelling and writing abilities, and their vocabulary development suffer in kind (Stanovich, 1994). Within this context, reading skill serves as the major foundational skill for all school-based learning, and without it, the chances for academic and occupational success are limited indeed. Because of its importance and visibility, particularly during the primary grades, difficulty learning to read squashes the excitement and love for learning that many youngsters enter school with. It is embarrassing and even devastating to read slowly and laboriously, and to demonstrate this weakness in front of peers on a daily basis. It is clear from our National Institute of Child Health and Human Development (NICHD)-supported longitudinal studies that follow good and poor readers from kindergarten into young adulthood that our young poor readers are not used to such failure. By the end of the first grade, we begin to notice substantial decreases in the children's self-esteem, self-concept, and motivation to learn to read if they have not been able to master reading skills and keep up with their age-mates. As we follow the children through elementary and middle-school grades, these problems compound, and, in many cases, very bright youngsters are unable to learn about the wonders of science, mathematics, literature and the like because they cannot read the grade-level textbooks. By high school, these children's potential for entering college has decreased to almost nil, with few choices available to them with respect to occupational and vocational opportunities. These individuals constantly tell us that they hate to read, primarily because it is such hard work, and their reading is so slow and laborious. As one adolescent in one of our longitudinal studies remarked recently, "I would rather have a root canal than read."

While failure to learn to read adequately is much more likely among poor children, among nonwhite children, and among nonnative speakers of English (Snow, et al, 1998), recent data derived from the National Assessment of Educational Progress (1994) reveals an alarming trend. In the State of California, 59% of fourth grade children had little or no mastery of the knowledge and skills necessary to perform reading activities at the fourth grade level compared to a national average of 44% below basic reading levels. Even more alarming is that this evidence of serious reading failure cuts across all ethnic and socioeconomic variables. While 71% of African-Americans, 81% of Hispanics, and 23% of Asians were reading below basic levels, 44% of white students in the fourth grade were also below the basic reading level necessary to use reading as a skill. Moreover, 49% of the fourth grade children in California who were reading below basic levels were from homes where the parents had graduated from college. In fact, the children of college-educated parents in California scored lowest with respect to their national cohort. These data underscore the fact that reading failure is a serious national problem and cannot simply be attributed to poverty, immigration, or the learning of English as a second language. The psychological, social, and economic consequences of reading failure are legion.

It is for this reason that the NICHD within the National Institutes of Health (NIH) considers reading failure to reflect not only an educational problem, but a significant public health problem as well. Within this context, a large research network consisting of 41 research sites in North America, Europe, and Asia are working hard to identify: (1) the critical environmental, experiential, cognitive, genetic, neurobiological, and instructional conditions that foster strong reading development; (2) the risk factors that predispose youngsters to reading failure, and (3) the instructional procedures that can be applied to ameliorate reading deficits at the earliest possible time. The NICHD has supported research to understand normal reading development and reading difficulties continuously since 1965 (see Fletcher & Lyon, 1998 for review). During the past 33 years, NICHD-supported scientists have studied the reading development of 34,501 children and adults. Many studies have been devoted to understanding the normal reading process, and 21,860 good readers have participated in investigations, some for as long as 12 years. Significant effort has also been deployed to understand why many children do not learn to read. To address this critical question, 12,641 individuals with reading difficulties have been studied, many for as long as 12 years. In addition, since 1985, the NICHD has initiated studies designed to develop early identification methods that can pinpoint children during kindergarten and the first grade who are at-risk for reading failure. These studies have provided the foundation for several prevention and early intervention projects now underway at 11 sites in the U.S. and Canada (Blachman, 1997; Fletcher & Lyon, 1998). Since 1985, 7,669 children (including 1,423 good readers) have participated in these reading instruction studies, and 3,600 youngsters are currently enrolled in longitudinal early intervention studies in Texas, Washington, Georgia, Massachusetts, New York, Florida, Colorado, North Carolina, and Washington, D.C. These studies have involved the participation of 1,012 classroom teachers, working in 266 schools and 985 classrooms.

With this as background, the remaining sections of this paper will focus on addressing several major questions relevant to reading development, reading disorders, and reading instruction:

1. How Do Children Learn To Read?
2. Why Do Some Children (And Adults) Have Difficulties Learning To Read?
3. How Can We Help Children Learn To Read?
4. For Which Children Are Which Teaching Approaches Most Beneficial At Which States Of Reading Development?

How Do Children Learn To Read? Understanding How Sounds Are Connected To Print?

In general, learning to read the English language is not as easy as conventional wisdom would suggest. Every type of writing system, whether it be a syllabic system as used by the Japanese, a morphosyllabic system as used by the Chinese (where a written symbol represents a unit of meaning), or an alphabetic system that is used in English, Spanish, and Scandinavian languages, (to name a few), presents challenges to the beginning reader (Adams, 1990; Blachman, 1991; Foorman, 1995; Feldman & Turvey, 1983; Gough & Hillinger, 1980; Liberman, 1989, 1997; Lukatella & Turvey, 1987). For example, in an English alphabetic system, the individual letters on the page are abstract and meaningless in and of themselves (Liberman & Shankweiler, 1991). They must eventually be linked to equally abstract sounds, called phonemes, blended together and pronounced as words, where meaning is finally realized. To learn to read English, the child must figure out the relationship between sounds and letters. Thus, the beginning reader must learn the connections between the 40 or so sounds of spoken English (the phonemes), and the 26 letters of the alphabet (see Liberman, Shankweiler, & Liberman, 1989 for review). What our NICHD research has taught us is that in order for a beginning reader to learn how to connect or translate printed symbols (letters and letter patterns) into sound, the would-be reader must understand that our speech can be segmented or broken into small sounds (phoneme awareness) and that the segmented units of speech can be represented by printed forms (phonics). This understanding that written spellings systematically represent the phonemes of spoken words (termed the alphabetic principle) is absolutely necessary for the development of accurate and rapid word reading skills (Blachman, 1997; Lyon & Chabra, 1996).

Why is phoneme awareness so critical for the beginning reader? Because if children cannot perceive the sounds in spoken words, for example, if they cannot "hear" the "at" sound in "fat" and "cat" and perceive that the difference lies in the first sound, they will have difficulty decoding or "sounding out" words in a rapid and accurate fashion. This awareness of the sound structure of our language seems so easy and commonplace that we take it for granted. But many children do not develop phoneme awareness, and for some interesting reasons that we are now beginning to understand. Unlike writing, the speech we use to communicate orally does not consist of separate sounds in words. For example, while a written word like "cat" has three letter-sound units, the ear hears only one sound, not three, when the word "cat" is spoken aloud (Liberman, 1983). This merging and overlapping of sounds into a sound "bundle" makes oral communication much more efficient. Consider how long it would take to have a conversation if each of the words that we uttered were segmented or "chopped" into their sound structure. In essence we would be spelling aloud the words that we were speaking. From the NICHD studies that were initiated in 1965 to understand how the reading process develops, we now have strong evidence that it is not the ear that understands that a spoken word like "cat" is divided into three sounds, and that these discrete sounds can be linked to the letters C-A-T, it is the brain that performs this function (Pugh, Shaywitz, Constable, Shaywitz, et al, 1996; Shaywitz, 1996). In some youngsters, the brain seems to have an easy time processing this type of information. However, in many children, the skill is only learned with difficulty, and thus must be taught directly, explicitly, and by a well-trained and informed teacher (Moats & Lyon, 1996). It has also become clear to us that the development of these critical early reading-related skills, such as phoneme awareness and phonics, are fostered when children are read to at home during the preschool years, when they learn their letter and number names, and when they are introduced at very early ages to concepts of print and literacy activities (Scarborough, 1989, 1990, 1991).

Does this mean that children who have difficulty understanding that spoken words are composed of discrete individual sounds that can be linked to letters suffer from brain dysfunction or damage? Not at all. It simply means that the neural systems that perceive the phonemes in our language are less efficient than in other children. This difference in neural efficiency can also be hypothesized to underlie the individual differences that we see every day in learning any skill such as singing, playing an instrument, constructing a house, painting a portrait, and the like. In some cases, our NICHD studies have taught us that the phonological differences we see in good and poor readers have a genetic basis (Cardon, Smith, Fulker, Kimberling, et al, 1994; DeFries, Fulker, & LaBuda, 1987). In other children, the differences seem to be attributable to a lack of exposure to language patterns and literacy-based interactions and materials during the preschool years (Olson, Conners, & Rack, 1991; Snow, et al., 1998).

As pointed out, the development of phoneme awareness, the development of an understanding of the alphabetic principle, and the translation of these skills to the application of phonics in reading words are non-negotiable beginning reading skills that ALL children must master in order to understand what they read and to learn from their reading sessions. Printed letters and words are the basic data on which reading depends, and the emerging reader must be able to recognize accurately and quickly spelling patterns and their mappings to speech. To recapitulate, these skills are supported nicely when children receive an abundance of early literacy experiences in the home and in preschool. But the development of phoneme awareness and phonics, while NECESSARY, are NOT SUFFICIENT for learning to read the English language so that meaning can be derived from print. In addition to learning how to "sound out" new and/or unfamiliar words, the beginning reader must eventually become proficient in reading, at a very fast pace, larger units of print, such as syllable patterns, meaningful roots, suffixes, and whole words.

The Development of Reading Fluency

While the ability to read words accurately is a NECESSARY skill in learning to read, the speed at which this is done becomes a critical factor in ensuring that children understand what they read (Lyon, in press; Samuels, 1994; Wolf, Bally, & Morris, 1986). As one child recently remarked, "If you don't ride a bike fast enough, you fall off." Likewise, if the reader does not recognize words quickly enough, the meaning will be lost. Although the initial stages of reading for many students require the learning of phoneme awareness and phonics principles, substantial practice of those skills, and continual application of those skills in text, fluency, and automaticity in decoding and word recognition must be acquired as well (Adams, 1990; Hall & Moats, 1999). Consider that a young reader (and even older readers for that matter) has only so much attentional capacity and cognitive energy to devote to a particular task. If the reading of the words on the page is slow and labored, the reader simply cannot remember what he or she has read, much less relate the ideas he or she has read about to his or her own background knowledge (Share & Stanovich, 1995). Children vary in the amount of practice that is required for fluency and automaticity in reading to occur. Some youngsters can read a word only once to recognize it again with greater speed; others need more than 20 or more exposures. The average child needs between four and 14 exposures to automatize the recognition of a new word (Adams, 1990). Therefore, in learning to read, it is vital that children read a large amount of text at their independent reading level (95% accuracy), and that the text format provides specific practice in the skills being learned (Hall & Moats, 1999).

Constructing Meaning From Print

The ultimate goal of reading instruction is to enable children to understand what they read. Again, the development of phoneme awareness, phonics skills, and the ability to read words fluently and automatically are NECESSARY, but NOT SUFFICIENT, for the construction of meaning from text. The ability to understand what is read appears to be based on several factors (see Adams, Treiman, & Pressley, 1998; Pressley, 1998 for reviews). Children who comprehend well seem to be able to activate their relevant background knowledge when reading, that is, they can relate what is on the page to what they already know. Good comprehenders have good vocabularies, since it is extremely difficult to understand something you cannot define. Good comprehenders have a knack for summarizing, predicting, and clarifying what they have read, and frequently use questions to guide their understanding. Good comprehenders are also facile in employing the sentence structure within the text to enhance their comprehension.

In general, if children can read the words on a page accurately and fluently, they will be able to construct meaning at two levels. At the first level, literal understanding is achieved. However, constructing meaning requires far more than literal comprehension. Children must eventually guide themselves through text by asking questions like, "Why am I reading this and how does this information relate to my reasons for doing so?" "What is the author's point of view?," "Do I understand what the author is saying and why?," "Is the text internally consistent?," and so on. It is this second level of comprehension that leads readers to reflective, purposeful understanding (Adams, et al, 1998).

The development of reading-comprehension skills, like the development of phoneme awareness, phonics, and fluency, needs to be fostered by highly trained teachers. Recent research shows that the teacher must arrange for opportunities for students to discuss the highlights of what they have read and any difficulties they have had when reading. Because the grammatical structures of written text are more varied and complex than those of casual, oral language (speaking to one another), regular exploration and explicit instruction on formal syntax is warranted. Children's reflections on what they have read can also be directly fostered through instruction in comprehension strategies.These sorts of discussions and activities should be conducted throughout a range of literacy genres, both fiction and nonfiction, and should be a regular component of the language arts curriculum throughout children's school years (see Anderson & Pearson, 1984; Pearson & Fielding, 1991; Pressley, 1998).

Other Factors That Influence Learning To Read

Our research continues to converge on the following findings: Good readers are phonemically aware and understand the alphabetic principle and can apply these skills to the development and application of phonics skills when reading words, and they can accomplish these applications in a fluent and accurate manner. Given the ability to rapidly and automatically decode and recognize words, good readers bring strong vocabularies and good syntactic and grammatical skills to the reading comprehension process, and actively relate what is being read to their own background knowledge via a variety of strategies. But what factors can provide a firm foundation for these skills to develop?

It is clear from research on emerging literacy that learning to read is a relatively lengthy process that begins very early in development and clearly before children enter formal schooling (Scarborough, 1989, 1991; Scarborough & Dobrich, 1994; Snow, et al, 1998). Children who receive stimulating literacy experiences from birth onward appear to have an edge when it comes to vocabulary development, an understanding of the goals of reading, and an awareness of print and literacy concepts. Children who are read to frequently at very young ages become exposed in interesting and exciting ways to the sounds of our language, to the concept of rhyming, and to other word and language play that serves to provide the foundation for the development of phoneme awareness. As children are exposed to literacy activities at young ages, they begin to recognize and discriminate letters. Without a doubt, children who have learned to recognize and print most letters as preschoolers will have less to learn upon school entry. The learning of letter names is also important because the names of many letters contain the sounds they most often represent, thus orienting youngsters early to the alphabetic principle or how letters and sounds connect. Ultimately, children's ability to understand what they are reading is inextricably linked to their background knowledge. Very young children who are provided opportunities to learn, think, and talk about new areas of knowledge will gain much from the reading process. With understanding comes the clear desire to read more and to read frequently, ensuring that reading practice takes place.

Why Do Some Children (and Adults) Have Difficulties Learning To Read?

Difficulties learning to read result from a combination of factors. In general, children who are most at-risk for reading failure are those who enter school with limited exposure to language and who have little prior understanding of concepts related to phonemic sensitivity, letter knowledge, print awareness, the purposes of reading, and general verbal skills, including vocabulary (Blachman, 1991). Children raised in poverty, youngsters with limited proficiency in English, children with speech and hearing impairments, and children from homes where the parent's reading level is low are relatively predisposed to reading failure (Snow, et al, 1998). Likewise, youngsters with sub-average intellectual capabilities have difficulties learning to read, particularly in the reading comprehension domain.

Given this general background, recent research has been able to identify and replicate findings that point to at least four factors that hinder reading development among children irrespective of their socioeconomic level and ethnicity. These four factors include deficits in phoneme awareness and the development of the alphabetic principle (and the accurate and fluent application of these skills to textual reading), deficits in acquiring reading comprehension strategies and applying them to the reading of text, the development and maintenance of motivation to learn to read, and the inadequate preparation of teachers.

Deficits in Phoneme Awareness And The Development Of The Alphabetic Principle

In essence, children who have difficulties learning to read can be readily observed. The signs of such difficulty are a labored approach to decoding or "sounding" unknown or unfamiliar words and repeated misidentification of known words. Reading is hesitant and characterized by frequent starts and stops and multiple mispronunciations. If asked about the meaning of what has been read, the child frequently has little to say. Not because he or she is not smart enough. In fact, many youngsters who have difficulty learning to read are bright and motivated to learn to read, at least initially. Their poor comprehension occurs because they take far too long to read the words, leaving little energy for remembering and understanding what they have read (Adams & Bruck, 1995).

Unfortunately, there is no way to bypass this decoding and word recognition stage of reading. A deficiency in these skills cannot be appreciably offset by using context to figure out the pronunciation of unknown words (Lyon, 1998; Perfetti, 1985; Stanovich, 1994). In essence, while one learns to read for the fundamental purpose of deriving meaning from print, the key to comprehension starts with the immediate and accurate reading of words (Beck & Juel, 1995; Liberman, et al, 1989). In fact, difficulties in decoding and word recognition are at the core of most reading difficulties (Brady & Shankweiler, 1991; Fletcher, Shaywitz, Shankweiler, Katz, et al, 1994; Liberman & Shankweiler, 1985; Lyon & Chhabra, 1996; Morris, Stuebing, Fletcher, Shaywitz, et al, 1998; Stanovich, 1993). To be sure, there are some children who can read words accurately and quickly yet do have difficulties comprehending, but they constitute a small portion of those with reading problems (Adams, 1990).

If the ability to gain meaning from print is dependent upon fast, accurate, and automatic decoding and word recognition, what factors hinder the acquisition of these basic reading skills? As mentioned above, young children who have a limited exposure to both oral language and print before they enter school are at-risk for reading failure. However, many children with robust oral language experience, average to above intelligence, and frequent interactions with books since infancy show surprising difficulties learning to read. Why?

In contrast to good readers who understand that segmented units of speech can be linked to letters and letter patterns, poor readers have substantial difficulty developing this "alphabetic principle". The culprit appears to be a deficit in phoneme awareness - the understanding that words are made up of sound segments called phonemes (Catts, 1989; Brady & Shankweiler, 1991; Torgesen, 1996). Difficulties in developing phoneme awareness can have genetic and neurobiological origins (Pennington, 1995; Shaywitz, 1997), or can be attributable to a lack of exposure to language patterns and usage during the preschool years (Snow, et al, 1998). The end result is the same, however. Children who lack phoneme awareness have difficulties linking speech sounds to letters. Their decoding skills are labored and weak, resulting in extremely slow reading. This labored access to print renders comprehension impossible. Thus, the purpose for reading is nullified because the children are too dysfluent to make sense out of what they read.

In studying approximately 34,501 children over the past 33 years, we have learned the following with respect to the role that phonemic awareness plays in the development of phonics' skills and fluent and automatic word reading:

1. Phonemic awareness skills assessed in kindergarten and first grade serve as potent predictors of difficulties learning to read. We have learned how to measure phonemic awareness skills as early as the first semester in kindergarten. And over the past decade we have refined these tasks so that we can predict with approximately 80% to 90% accuracy who will become good readers and who will have difficulties learning to read (see Torgesen, Wagner, & Rashotte, 1996).
2. We have learned that the development of phonemic awareness is a necessary, but not sufficient, condition for learning to read. A child must integrate phonemic skills into the learning of phonics principles, must practice reading so that word recognition becomes rapid and accurate, and must learn how to actively use comprehension strategies to enhance meaning (see Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998).
3. We have begun to understand how genetics are involved in learning

to read, and this knowledge may ultimately contribute to our prevention efforts through the assessment of family reading histories (see Pennington, 1995).

4. We are entering very exciting frontiers in understanding how early brain development can provide a window on how reading develops. Likewise, we are conducting studies to help us understand how specific teaching methods change reading behavior and how the brain changes as reading develops (see Shaywitz, Pugh, Jenner, Fulbright, et al, in press).
5. We have learned that just as many girls as boys have difficulties learning to read. Until five years ago, the conventional wisdom was that many more boys than girls had such difficulties. Now females should have equal access to screening and intervention programs (See Shaywitz, et al, 1992; Shaywitz, Shaywitz, Pugh, Constable, et al, 1995).
6. We have learned that for 90% to 95% of poor readers, prevention and early intervention programs combine instruction in phoneme awareness, phonics, fluency development, and reading comprehension strategies, provided by well trained teachers, can increase reading skills to average reading skills to average reading levels. However, we have also learned that if we delay intervention until nine years of age (the time that most children with reading difficulties receive services), approximately 75% of the children will continue to have difficulties learning to read throughout high school. To be clear, while older children and adults can be taught to read, the time and expense of doing so is enormous (Foorman, et al, 1998; Shaywitz, et al, 1992; Torgesen & Davis, 1996; Torgesen, et al, 1997; Vellutino, Scanlon, Sipay, Small, et al, 1996).

Deficits In Acquiring Reading Comprehension Strategies

Some children encounter obstacles in learning to read because they do not derive meaning from the material that they read. In the later grades, higher-order comprehension skills become paramount for learning. Reading comprehension places significant demands on language comprehension and general verbal abilities. Constraints in these areas will typically limit comprehension. In a more specific vein, deficits in reading comprehension are related to: (1) inadequate understanding of the words used in the text; (2) inadequate background knowledge about the domains represented in the text; (3) a lack of familiarity with the semantic and syntactic structures that can help to predict the relationships between words; (4) a lack of knowledge about different writing conventions that are used to achieve different purposes via text (humor, explanation, dialogue, etc.); (5) verbal reasoning ability which enables the reader to "read between the lines", and (6) the ability to remember verbal information (see Adams, et al, 1998).

If children are not provided early and consistent experiences that are explicitly designed to foster vocabulary development, background knowledge, the ability to detect and comprehend relationships among verbal concepts, and the ability to actively employ strategies to ensure understanding and retention of material, reading failure will occur no matter how robust word recognition skills are (Pressley, 1998).

Our current understanding of how to develop many of these critical language and reasoning capabilities related to reading comprehension is not as well developed as the information related to phoneme awareness, phonics, and reading fluency. We have not yet obtained clear answers with respect to why some children have a difficult time learning vocabulary and how to improve vocabulary skills. Our knowledge about the causes and consequences of deficits in syntactical development is sparse. A good deal of excellent research has been conducted on the application of reading comprehension strategies, but our knowledge of how to teach children to apply these strategies in an independent manner and across contexts is just emerging (see Adams, et al, 1998) for discussion.

The Development And Maintenance Of Motivation To Learn To Read

A major factor that aids or limits the amount of improvement that a child may make in reading is highly related to their motivation to persist in learning to read despite difficulties. Very little is known with respect to the exact timing and course of motivational problems in reading development, but it is clear that reading failure has a devastating effect on children (Adams, 1990; Adams, et al, 1998). In the primary grades, reading activities constitute the major portion of academic activities undertaken in classrooms, and children who struggle with reading are quickly noticed by peers and teachers. Although most children enter formal schooling with positive attitudes and expectations for success, those who encounter difficulties learning to read clearly attempt to avoid engaging in reading behavior as early as the middle of the first grade (Hall & Moats, 1999). It is known that successful reading development is predicated on practice in reading, and obviously the less a child practices, the less developed the various reading skills will become. To counter these highly predicable declines in the motivation to learn to read, prevention and early intervention programs are critical

Inadequate Preparation Of Teachers

As evidence mounts that reading difficulties originate in large part from difficulties in developing phoneme awareness, phonics, reading fluency, and reading comprehension strategies, the need for informed instruction for the millions of children with insufficient reading skills is an increasingly urgent problem. Unfortunately, several recent studies and surveys of teacher knowledge about reading development and difficulties indicate that many teachers are under-prepared to teach reading (Lyon, Vaasen, & Toomey, 1989; Moats, 1994; Moats & Lyon, 1996; Nolan, McCutchen, & Berninger, 1990). Most teachers receive little formal instruction in reading development and disorders during either undergraduate and/or graduate studies, with the average teacher completing only two reading courses (Hall & Moats, 1999). Surveys of teachers taking these courses indicate, a) teachers rarely have the opportunity to observe professors demonstrate instructional reading methods with children; b) course work is superficial and typically unrelated to teaching practice, and c) the supervision of student teaching and practicum experiences is fragmentary and inconsistent (Lyon, et al, 1989). At present, motivated teachers are often left to obtain specific skills in teaching phonemic awareness, phonics, reading fluency, and comprehension on their own by seeking out workshops or specialized instructional manuals.

Teachers who instruct youngsters who display reading difficulties must be well versed in understanding the conditions that have to be present for children to develop robust reading skills. They also must be thoroughly trained to assess and identify children at-risk for reading failure at early ages. Unfortunately, many teachers and administrators have been caught between conflicting schools of thought about how to teach reading and how to help students who are not easily progressing. In reading education, teachers are frequently presented with a "one size fits all" philosophy that emphasizes either a "whole language" or "phonics" orientation to instruction. No doubt, this parochial type of preparation places many children at continued risk for reading failure since it is well established that no reading program should be without all the major components of reading instruction (phoneme awareness, phonics, fluency, reading comprehension), and since the real question is which children need what, how, for how long, with what type of teacher, and in what type of setting (Moats, 1994, in press).

It is hard to find disagreement in the educational community that the direction and fabric of teacher education programs in language arts and reading must change. However, bringing about such change will be difficult. In addition, if teacher preparation in the area of language and reading is expected to become more thoughtful and systematic, changes in how teaching competencies and certification requirements are developed and implemented is a must. Currently, in many states, the certification offices within state departments of education do not maintain formal and collaborative relationships with academic departments within colleges of education. Thus, the requirements that a student may be expected to satisfy for a college degree may bear little relationship to the requirements for a teaching certificate. More alarming is the fact that both university and state department of education requirements for the teaching of reading may not reflect, in any way, the type and depth of knowledge that teachers must have to ensure literacy for all (Moats & Lyon, 1994).

For Which Children Are Which Teaching Approaches Most Beneficial? At Which Stages Of Reading Development? A Summary Of Findings

1. Learning to read is a lengthy and difficult process for many children, and success in learning to read is based in large part on developing language and literacy-related skills very early in life. A massive effort needs to be undertaken to inform parents and the educational and medical communities of the need to involve children in reading from the first days of life, to engage children in playing with language through nursery rhymes, storybooks, and writing activities, and to bring to children as early as possible experiences that help them understand the purposes of reading, and the wonder and joy that can be derived from reading. Parents must become intimately aware of the importance of vocabulary development and the use of verbal interactions with their youngsters to enhance grammar, syntax, and verbal reasoning.
2. Preschool children should be encouraged to learn the letters of the alphabet, to discriminate letters from one another, to print letters, and to attempt to spell words that they hear. By introducing young children to print, their exposure to the purposes of reading and writing will increase, and their knowledge of the conventions of print and their awareness of print concepts will increase.
3. Reading out loud to children is a proven activity for developing vocabulary growth and language expansion, and plays a casual role

in developing both receptive and expressive language capabilities. Reading out loud can also be used to enhance children's background knowledge of new concepts that may appear in both oral and written language.

4. Our NICHD prevention and early intervention studies in Houston, Tallahassee, Albany, Syracuse, Atlanta, Boston, Seattle, and Washington, D.C. all speak to the importance of early identification and intervention with children at-risk for reading failure. Procedures now exist to identify such children with good accuracy. This information needs to be widely disseminated to schools, teachers, and parents.
5. Kindergarten programs should be designed so that all children will develop the prerequisite phonological, vocabulary, and early reading skills necessary for success in the first grade. All children should acquire the ability to recognize and print both upper and lowercase letters with reasonable ease and accuracy, develop familiarity with the basic purposes and mechanisms of reading and writing, and develop age-appropriate language comprehension skills.
6. Beginning reading programs should be constructed to ensure that adequate instructional time is allotted to the teaching of phonemic awareness skills, phonics skills, the development of reading fluency and automaticity, and the development of reading comprehension strategies. All of these components of reading are necessary, but not sufficient in and of themselves. For children demonstrating difficulty in learning to read, it is imperative that each of these components be taught within an integrated context, and that ample practice in reading familiar material be afforded. For some children, our research demonstrates that explicit, systematic instruction is crucial in helping them to understand and apply critical phonemic, phonics, fluency, and reading comprehension skills. Even for children who seem to grasp reading concepts easily, learning to read is not a natural process. Reading instruction must be thoughtful and planned, and must incorporate the teaching of all the critical reading skills.
7. A major impediment to serving the needs of children demonstrating difficulties learning to read is current teacher-preparation practices. Many teachers lack basic knowledge about the structure of the English language, reading development, and the nature of reading difficulties. Major efforts should be undertaken to ensure that colleges of education possess the expertise and commitment to foster expertise in teachers at both pre-service and in-service levels.
8. The preparation of teachers and the teaching of reading in our nation's classrooms must be based upon research evidence of the highest caliber and relevance. Research that is used to guide policy and instructional practice should be characterized by methodological rigor and the convergence of studies demonstrated to be representative, reliable, valid and described with sufficient clarity and specificity to permit independent replication. Moreover, we must realize that no one study or type of research methodology can be used to guide practice. To reiterate a significant point, the research

knowledge that is employed to guide policy and practice must inform us how different components of reading behavior are best developed by various approaches to reading instruction for children of differing backgrounds, learning characteristics, and literacy experiences.

In short, both the provision of quality reading instruction to our nation's children and the preparation of teachers are critically dependent upon the development of a body of knowledge about reading development, reading instruction, and reading difficulties that reflect the tremendous developmental complexity inherent in the study of individual differences and the substantial contextual complexity inherent in studying children, teachers, and student-teacher interactions in classrooms. For too long, the educational enterprise in this country has gravitated toward a "one-size-fits-all" solution to both research methods and classroom teaching practices. For example, debates persist about the merits of conducting quantitative research studies versus qualitative/descriptive research studies. Likewise, the debate about code-based instruction versus whole language (literature-based) instruction continues to distract and confuse. Why such parochial and superficial discussions continue to drive current trends in research, teacher preparation, and classroom reading instruction is beyond my analytic capability. I do know that we have to begin to invest more and invest differently in our research infrastructure if we are to ever understand the complexity of reading development and optimal ways to provide reading instruction.

There is no doubt that the research of the future must combine research strategies that are experimentally responsible, test-specific, and well defined ideas, that yield data that are reliable and are described sufficiently to permit replication, with research methods that provide a qualitative, albeit reliable, view of the complexity and the process involved in imparting reading concepts to children of varying abilities in classrooms. The question is *NOT* whether quantitative, hypothesis-driven research methods are more powerful than descriptive methodologies embodied in ethnographic studies, case histories, or classroom observation studies.The question we must ask and answer is *WHICH COMBINATIONS OF RESEARCH METHODS AND APPROACHES ARE MOST APPROPRIATE FOR WHICH SPECIFIC RESEARCH QUESTIONS?* (Lyon & Moats, 1997). Likewise, instructional questions that reflect an either-or phonics/whole language reading program choice must be replaced by questions that embrace the complexity of reading instruction. For example, *FOR WHICH CHILDREN ARE WHICH READING INSTRUCTION MODELS/APPROACHES/METHODS MOST BENEFICIAL AT WHICH STAGES OF READING DEVELOPMENT AND IN WHICH CLASSROOM ENVIRONMENTS?*

To answer these questions, our research efforts must include longitudinal studies to capture the changes over time that our children will demonstrate during instruction, and that will provide us with an appropriate window on instructional issues related to intensity, duration, timing of different approaches, and contextual-decontextual influences on the development of critical reading behaviors. The investment in our research efforts must certainly be commensurate with the cost of conducting multi-method, multi-level, multi-trait longitudinal studies that have the capability of accounting for the multiple interacting factors that comprise the learning-to-read process (Fletcher & Lyon, 1998; Lyon & Moats, 1997).

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CHAPTER TWELVE

Teaching for Creativity: Two Dozen Tips

ROBERT J. STERNBERG, PH.D.
IBM Professor of Education and Psychology,
Department of Psychology,
Yale University

WENDY M. WILLIAMS
Cornell University

What makes a person creative? Why are some people more creative and others less so? We often think that the creative people are the ones who have some rare and unattainable ability, but it is not so. Creative people are ones who make a decision:They decide to buy low and sell high in the world of ideas. In this article, we first describe this idea of creativity as a decision, which is formalized as an investment theory of creativity. Then we describe 24 tips you can use in your teaching in order to foster creativity in your students and in yourself.

The Investment Theory of Creativity

Buying Low and Selling High

The investment theory of creativity (Sternberg & Lubart, 1995) asserts that creative thinkers are like good investors: They buy low and sell high. Whereas investors do so in the world of finance, creative people do so in the world of ideas. Creative people generate ideas that are like undervalued stocks (stocks with a low price-to-earnings ratio), and both the stocks and the ideas generally are rejected by the public. When creative ideas are proposed, they often are viewed as bizarre, useless, and even foolish, and summarily are rejected. The person proposing them often is regarded with suspicion and perhaps even with disdain and derision.

Creative ideas are both novel and valuable. Why, then, are they rejected? Because the creative innovator stands up to vested interests and defies the crowd. The crowd does not maliciously or willfully reject creative notions; rather it does not realize, and often does not want to realize, that the proposed idea represents a valid and superior way of thinking. The crowd generally perceives opposition to the status quo as annoying, offensive, and reason enough to ignore innovative ideas.

Evidence abounds that creative ideas are rejected (Sternberg & Lubart, 1995). Initial reviews of major works of literature and art are often negative. Toni Morrison's *Tar Baby* received negative reviews when it was first published, as did Sylvia Plath's *The Bell Jar*. The first exhibition in Munich of the Norwegian painter, Edvard Munch, opened and closed the same day because of the strong negative response from the critics. Some of the greatest scientific papers are rejected not just by one, but also by several journals before being published. John Garcia, a distinguished biopsychologist, was summarily denounced when he first proposed that a form of learning called classical conditioning could be produced in a single trial of learning (Garcia & Koelling, 1966).

From the investment view, then, the creative person buys low by presenting a unique idea and then attempting to convince other people of its value. After convincing others that the idea is valuable, which increases the perceived value of the investment, the creative person sells high by leaving the idea to others and then moving on to another idea. Although people typically want others to love their ideas, immediate universal applause for an idea usually indicates that it is not particularly creative.

You can foster creativity by buying low and selling high in the world of ideas–defy the crowd. Creativity is as much a decision about and an attitude toward life as it is a matter of ability. We routinely witness creativity in young children, but it is hard to find in older children and adults because their creative potential has been suppressed by a society that encourages intellectual conformity. We begin to suppress children's natural creativity when we expect them to color within the lines in their coloring books.

Balancing Analytic, Synthetic, and Practical Abilities

Creative work requires applying and balancing three abilities that can all be developed (Sternberg 1985; Sternberg & Lubart, 1995; Sternberg & Williams, 1996).

Synthetic ability is what we typically think of as creativity. It is the ability to generate novel and interesting ideas. Often the person we call creative is a particularly good synthetic thinker who makes connections between things that other people do not recognize spontaneously.

Analytic ability is typically considered to be critical thinking ability. A person with this skill analyzes and evaluates ideas. Everyone, even the most creative person you know, has better and worse ideas. Without well-developed analytic ability, the creative thinker is as likely to pursue bad ideas as to pursue good ones. The creative individual uses analytic ability to work out the implications of a creative idea and to test it.

Practical ability is the ability to translate theory into practice and abstract ideas into practical accomplishments. An implication of the investment theory of creativity is that good ideas do not sell themselves. The creative person uses practical ability to convince other people that an idea is worthy. For example, every organization has a set of ideas that dictate how things, or at least some things, should be cloned. To propose a new procedure you must sell it by convincing others that it is better than the old one. Practical ability is also used to recognize ideas that have a potential audience.

Creativity requires a balance among synthetic, analytic, and practical abilities. The person who is only synthetic may come up with innovative ideas, but cannot recognize or sell them. The person who is only analytic may be an excellent critic of other people's ideas, but is not likely to generate creative ideas. The person who is only practical may be an excellent salesperson, but is as likely to sell ideas or products of little or no value as to sell genuinely creative ideas.

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Encourage and develop creativity by teaching students to find a balance among synthetic, analytic, and practical thinking. A creative attitude is at least as important as are creative thinking skills (Schank 1988). The majority of teachers want to encourage creativity in their students, but they are not sure how to do so. Those teachers and you can use the 15 strategies presented below to develop creativity in yourselves, your students, and others around you. Although we present the strategies in terms of teachers and students, these strategies apply equally to administrators working with teachers, parents working with children, or people trying to develop their own creativity.

Twenty-Four Tips for Developing Creativity

1. Model Creativity

   The most powerful way to develop creativity in your students is to be a role model. Children develop creativity not when you tell them to, but when you show them.

   The teachers most of you probably remember from your school days are not those who crammed the most content into their lectures. The teachers you remember are those whose thoughts and actions served as your role model. Most likely they balanced teaching content with teaching you how to think with and about that content.

   Occasionally, we'll teach a workshop on developing creativity and someone will ask exactly how to develop creativity. Bad start. You cannot be a role model for creativity unless you think and teach creatively yourself. So think carefully about your values, goals, and ideas about creativity and show them in your actions.

2. Build Self-Efficacy

   The main limitation on what students can do is what they think they can do. All students have the capacity to be creators and to experience the joy associated with making something new, but first we must give them a strong base for creativity. Sometimes teachers and parents unintentionally limit what students can do by sending messages that express or imply limits on students' potential accomplishments. Instead, help students believe in their own ability to be creative.

3. Question Assumptions

   We all have assumptions. Often we do not know we have these assumptions because they are widely shared. Creative people question those assumptions and eventually lead others to do the same. When Copernicus suggested that the Earth revolves around the sun, the suggestion was viewed as preposterous because everyone could see that the sun revolves around the Earth. Galileo's ideas, including the relative rates of falling objects, caused him to be banned as a heretic.

   Sometimes it is not until many years later that the crowd realizes the limitations or errors of their assumptions and the value of the creative person's thoughts. The impetus of those who question assumptions allows for cultural, technological, and other forms of advancement.

Teachers can be role models for questioning assumptions. You can show students that what they assume they know, they do not really know.

Of course, students shouldn't question every assumption. There are times to question and then to try to reshape the environment and there are times to adapt to it. Some creative people question so many things so often that others stop taking them seriously. Everyone has to learn which assumptions are worth questioning and which battles are worth fighting. Sometimes it's better to leave the inconsequential assumptions alone so that you have an audience when you find something worth the effort.

Make questioning a part of the daily classroom exchange. It is more important for students to learn what questions to ask-and how to ask them-than to learn the answers. Help your students evaluate their questions by discouraging the idea that you ask questions and they simply answer them. Avoid perpetuating the belief that your role is to teach students the facts. Instead, help the students understand that what matters is their ability to use facts. Help your students learn how to formulate good questions and how to answer questions.

We all tend to make a pedagogical mistake by emphasizing the answering and not the asking of questions. The good student is perceived as the one who rapidly furnishes the right answers. The expert in a field thus becomes the extension of the expert student-the one who knows and can recite a lot of information. As John Dewey (1933) recognized, how we think is often more important than what we think. We need to teach students how to ask the right questions (good, thought-provoking, and interesting ones) and lessen the emphasis on rote learning.

4. How to Defining and Redefine Problems

Promote creative performance by encouraging your students to define and redefine problems and projects. Encourage creative thinking by having students choose their own topics for papers or presentations, choose their own ways of solving problems, and sometimes choose again if they discover that their selection was a mistake. Allow your students to pick their own topics, subject to your approval, on at least one paper each term. Approval ensures that the topic is relevant to the lesson and has a chance of leading to a successful project.

A successful project (1) is appropriate to the course's goals, (2) illustrates a student's mastery of at least some of what has been taught, and (3) can earn a good grade. If a topic is so far from the goals that you will feel compelled to lower the grade, ask the student to choose another topic.

You cannot always offer students choices, but giving choices is the only way for them to learn how to choose. A real choice is not deciding between drawing a cat or a dog, nor is it picking one state in the USA to present at a project fair. Give your students latitude in making choices to help them to develop taste and good judgment, both of which are essential elements of creativity.

Sometimes we all make mistakes in choosing a project or in the way we select to accomplish it. Just remember that an important part of creativity is the analytic part, learning to recognize a mistake. Give your students that chance and the opportunity to redefine their choices.

5. Encourage Idea Generation

Once the problem is defined or redefined, it is time for students to generate ideas and solutions. The environment for generating ideas must be relatively free of criticism. The students may acknowledge that some ideas are better or worse, but you must not be harsh or critical. Aim to identify and encourage any creative aspects of the ideas presented and suggest new approaches to any ideas that are simply uncreative. Praise your students for generating many ideas, regardless of whether some are silly or unrelated, while encouraging them to identify and develop their best ideas into high-quality projects.

Your students can use project planning in and out of school and in the future. Questions about marriage, family, and careers are best answered after thoroughly considering many ideas. Teaching students the value of generating numerous ideas enhances their creative-thinking ability and benefits them now and in the future.

6. Cross-Fertilize Ideas

Stimulate creativity by helping students to think across subjects and disciplines. The traditional school environment often has separate classrooms and classmates for different subjects and seems to influence students into thinking that learning occurs in discrete boxes-the math box, the social studies box, and the science box. But creative ideas and insights often result from integrating material across subject areas, not from memorizing and reciting material.

Teaching students to cross-fertilize draws on their skills, interests, and abilities, regardless of the subject. For example, if your students are having trouble understanding math, you might ask them to draft test questions related to their special interests-ask the baseball fan to devise geometry problems based on the game. The context may spur creative ideas because the student finds the topic (baseball) enjoyable and it may counteract some of the anxiety caused by geometry. Cross-fertilization motivates students who aren't interested in subjects taught in the abstract.

One way to enact cross-fertilization in the classroom is to ask students to identify their best and worst academic areas. Then ask them to come up with project ideas in their weak area based on ideas borrowed from one of the strongest areas. Explain to them, for example, that they can apply their interest in science to social studies by analyzing the scientific aspects of trends in national politics.

7. Allow Time for Creative Thinking

Ours is a society in a hurry. We eat fast food, we rush from one place to another, and we value quickness. Indeed, one way to say someone is smart is to say that the person is quick (Sternberg, 1985), a clear indication of our emphasis on time. Just take a look at the format of our standardized tests. Lots of multiple-choice problems are squeezed into a brief time slot.

Most creative insights, however, do not happen in a rush (Gruber, 1986). We need time to understand a problem and to toss it around. If we are asked to think creatively, we need time to do it well. If you stuff questions into your tests or give your students more homework than they can complete, then you are not allowing them time to think creatively.

8. Instruct and Assess Creatively
   If you give only multiple-choice tests, students quickly learn the type of thinking that you value, no matter what you say. If you want to encourage creativity, you need to include at least some opportunities for creative thought in assignments and tests. Ask questions that require factual recall, analytic thinking, and creative thinking. For example, students might be asked to learn about a law, analyze the law, and then think about how the law might be improved.

9. Reward Creative Ideas and Products
   It is not enough to talk about the value of creativity. Students are used to authority figures who say one thing and do another. They are exquisitely sensitive to what teachers value when it comes to the bottom line, namely, the grade or evaluation. If you do not put your money where your mouth is, they will go with the money–that is, the grade.

   Reward creative efforts. For example, assign a project and remind students that you are looking for them to demonstrate their knowledge, analytical and writing skills, and creativity. Let them know that creativity does not depend on your agreement with what they write, only that they express ideas that represent a synthesis between existing ideas and their own thoughts. You need to care only that the ideas are creative from the students' perspectives, not necessarily creative with regard to the state of the art. Students may generate an idea that someone else has already had.

   Some teachers complain that they cannot grade creative responses with as much objectivity as they can apply to multiple-choice or short-answer responses. They are correct in that there is some sacrifice of objectivity. However, research shows that evaluators are remarkably consistent in their assessments of creativity (Amabile, 1983; Sternberg & Lubart, 1995). If the goal of assessment is to instruct students, then it is better to ask for creative work and evaluate it with somewhat less objectivity than to evaluate students exclusively on uncreative work. Let your students know that there is no completely objective way to evaluate creativity.

10. Encourage Sensible Risks
    Creative people take risks and defy the crowd by buying low and selling high. Defying the crowd means risking the crowd's wrath. But there are sensible-and less sensible-reasons to defy the crowd. Creative people take sensible risks and produce ideas that others

ultimately admire and respect as trend setting. In taking these risks, creative people sometimes make mistakes, fail, and fall flat on their faces.

We emphasize sensible risk-taking because we are not talking about risking life and limb. To help students learn to take sensible risks, encourage them to take some intellectual risks with courses, activities, and teachers-to develop a sense of how to assess risks.

Nearly every major discovery or invention entailed some risk. When a movie theater was the only place to see a movie, someone created the idea of the home video industry. Skeptics wondered if anyone would want to see videos on a small screen. Another initially risky idea was the home computer. Would anyone have enough use for a home computer to justify the cost? These ideas were once risks that are now ingrained in our society.

Given the learning opportunities that derive from taking risks and the achievement that learning makes possible, why are so few children willing to take risks in school? The reason is that perfect test scores and papers receive praise; failure may mean extra work. Failure to attain a certain academic standard is perceived as a lack of ability and motivation rather than as reflecting a desire to grow. Teachers advocate playing it safe when they give assignments without choices and allow only particular answers to questions.

11. Tolerate Ambiguity

People like things to be in black and white. We like to think that a country is good or bad (ally or enemy) or that a given idea in education works or doesn't work. The problem is that there are a lot of grays in creative work. Artists working on new paintings and writers working on new books often report feeling scattered and unsure in their thoughts. They need to figure out whether they are even on the right track.

A creative idea tends to come in bits and pieces and develops over time. But the period in which the idea is developing tends to be uncomfortable. Without time or the ability to tolerate ambiguity, you may jump to a less than optimal solution.

Tolerating ambiguity is uncomfortable. When a student has almost the right topic for a paper or almost the right science project, it's tempting to accept the near miss. To help students become creative, encourage them to accept and extend the period in which their ideas do not quite converge. Ultimately, they may come up with better ideas.

12. Allow Mistakes

Buying low and selling high carries a risk. Many ideas are unpopular simply because they are not good. People often think a certain way because that way works better than other ways. But once in a while a great thinker comes along–a Freud, a Piaget, a Chomsky, or an Einstein-and shows us a new way to think. These thinkers made contributions because they allowed themselves and their collaborators to take risks and make mistakes.

Many of Freud's and Piaget's ideas are wrong. Freud confused Victorian issues regarding sexuality with universal conflicts and

Piaget misjudged the ages at which children could perform certain cognitive feats. Their ideas were great not because they lasted forever, but because they became the basis for other ideas. Freud's and Piaget's mistakes allowed others to profit from the ideas and go beyond the earlier ideas.

Schools are often unforgiving of mistakes. Errors on schoolwork are often marked with a large and pronounced X. When children respond to questions with incorrect answers, some teachers pounce on the students for not having read or understood the material and other students snicker. When children go outside the lines in the coloring book, or use a different color, they are corrected. In hundreds of ways and in thousands of instances over the course of a school career, children learn that it is not all right to make mistakes. The result is that they become afraid to risk the independent and the sometimes-flawed thinking that leads to creativity.

When your students make mistakes, ask them to analyze and discuss these mistakes. Often, mistakes or weak ideas contain the germ of correct answers or good ideas. In Japan, teachers spend entire class periods asking children to analyze the mistakes in their mathematical thinking. For the teacher who wants to make a difference, exploring mistakes can be a learning and growing opportunity.

13. Identify and Surmount Obstacles

Creative thinkers almost inevitably encounter resistance. The question is whether the creative thinker has the fortitude to persevere. We understand why so many young and promising creative thinkers disappear. Sooner or later, they decide that being creative is not worth the resistance and punishment. The truly creative thinkers pay the short-term price because they recognize that they can make a difference.

Describe obstacles that you, friends, and famous people have faced while trying to be creative; otherwise your students may think that obstacles confront only them. Include stories about people who weren't supportive, bad grades for unwelcome ideas, and cool receptions to your ideas. To help your students deal with obstacles, remind them of the many creative people whose ideas were initially shunned and help them develop an inner sense of awe of the creative act. You can suggest that they reduce their concern over what others think, but it is tough for students to lessen their dependence on their peers.

When a student attempts to surmount an obstacle, praise the effort, whether or not the student is entirely successful. Point out aspects of the student's attack that were successful and why, and then suggest other ways to confront similar obstacles. You can also tactfully critique counterproductive approaches by describing a better approach, as long as you praise the attempt. Ask the class to brainstorm about ways to confront a given obstacle to get them thinking about the many strategies we can use to confront problems. Consider the student who has always been too nervous to act in school plays or to sing a solo. Spend a half-hour asking students to generate strategies for dealing with performance anxiety and to chronicle personal examples that show how nervousness can be disabling. List ideas on the board and ask the class to critique them. Encourage students to try a couple of the strategies and praise them for any attempts at overcoming performance anxiety. The emphasis on tackling obstacles should help students focus on solving problems instead of being limited by them.

14. Teach Self-Responsibility
    Part of teaching students to be creative is teaching them to take responsibility for both success and failure. Teaching students how to take responsibility means teaching students to (1) understand their creative process, (2) criticize themselves, and (3) take pride in their best creative work. Unfortunately, many teachers and parents look for-or allow students to look for-an outside enemy responsible for failures. It sounds trite to say that you should teach students to take responsibility for themselves, but sometimes there is a gap between what we know and how we translate thought into action. In practice, people differ widely in the extent to which they take responsibility for the causes and consequences of their actions. Creative people need to take responsibility for themselves and for their ideas.

15. Promote Self-Regulation
    You cannot help each student during each creative process. Your students must take control of the process. After forming initial creative products and awakening the joy of creating in your students, teach them strategies for self-regulation. Self-directed creating is how most of us work throughout our lives-and especially in our lives outside of school. Here are some things students can do to promote their self-regulation: 1. List multiple ideas for an assignment, 2. Assess ideas for creativity and pursue one, 3. Defend your choice, 4. Develop plans for completing the assignment, including how and where to find information, and how and when you will finish the project, 5. Keep a daily log of progress, roadblocks, and how you surmounted problems, 6. Participate in daily class discussions regarding progress on the report and physical distractions (e.g., being hungry or tired), 7. Discuss teacher feedback on finished projects, and 8. Assess a classmate's project and review and discuss peer evaluations.

16. Delay Gratification
    Part of being creative means being able to work on a project or task for a long time without immediate or interim rewards. Students must learn rewards are not always immediate and that there are benefits to delaying gratification.

    Many people believe that they should reward children immediately for good performance, and that children should expect rewards. This style of teaching and parenting emphasizes the here and now and often comes at the expense of what is best in the long term.

    An important lesson in life and one that is intimately related to developing the discipline to do creative work is to learn to wait for rewards. The greatest rewards are often those that are delayed. Give your students examples of delayed gratification in your life and in the lives of creative individuals and help them apply these examples to their lives.

Hard work often does not bring immediate rewards. Children do not immediately become expert baseball players, dancers, musicians, or sculptors. And the reward of becoming an expert seems far away. Children often succumb to the temptations of the moment-watching television or playing video games. The people who make the most of their abilities are those who wait for a reward and recognize that few serious challenges are met in a moment. Ninth-grade students may not see the benefits of hard work, but the advantages of a solid academic performance will he obvious when those students apply to college.

The short-term focus of most school assignments does little to teach children the value of delaying gratification. Projects are clearly superior in meeting this goal, but it is difficult to assign home projects if you are not confident of parental involvement and support. By working on a task for many weeks or months, a student learns the value of making incremental efforts for long-term gains.

17. Encourage Creative Collaboration

Creative performance often is viewed as a solitary occupation-we picture the writer sitting alone with her writing pad, the artist painting feverishly at 4 a.m., or the musician playing for his cats into the wee hours. In reality, people often work in groups. Collaboration can spur creativity. Encourage your students to collaborate with creative people because we all learn by example. Students benefit from seeing the techniques, strategies, and approaches that others use in the creative process. Also, students absorb the enthusiasm and joy many creative people exude as they go about the business of making something new.

Finding practical ways to encourage creative performance in groups of students is essential because you cannot work with students one-on-one all of the time. Because life often involves working with others, it is worthwhile to give students the chance to work collaboratively and to make the process of collaboration more creative.

18. Imagine Other Viewpoints

An essential aspect of working with other people and getting the most out of collaborative creative activity is to imagine ourselves in other people's shoes. We broaden our perspective by learning to see the world from a different point of view, and that experience enhances our creative thinking and contributions. Encourage your students to see the importance of understanding, respecting, and responding to other people's points of view. Many bright and potentially creative children never achieve success because they do not develop practical intelligence (Sternberg 1985, 1997; Sternberg et al., in press). They may do well in school and on tests, but they never learn how to get along with others or to see things and themselves as others see them.

19. **Recognize Person-Environmental Fit**

What is judged as creative is an interaction between a person and the environment (Csikszentmihalyi, 1988; Gardner, 1993; Sternberg, in press; Sternberg & Lubart, 1995). The very same product that is rewarded as creative in one time or place may be scorned in another. In The Dead Poets' Society, a teacher whom the audience might well judge to be creative is viewed as incompetent by the school's administration. Similar experiences occur many times a day in many settings. There is no absolute standard for what constitutes creative work. The same product or idea may be valued or devalued in different environments. The lesson is that we need to find a setting in which our creative talents and unique contributions are rewarded or we need to modify our environment.

By building a constant appreciation of the importance of person-environment fit, you prepare your students for choosing environments that are conducive to their creative success. Encourage your students to examine environments to help them learn to select and match environments with their skills.

20. **Find Excitement**

To unleash your students' best creative performances, you must help them find what excites them. Remember that it may not be what really excites you. People who truly excel in a pursuit, whether vocational or avocational, almost always genuinely love what they do. Certainly the most creative people are intrinsically motivated in their work (Amabile, 1996). Less creative people often pick a career for the money or prestige and are bored or loathe their career. These people do not do work that makes a difference in their field.

Helping students find what they really love to do is often hard and frustrating work. Yet, sharing the frustration with them now is better than leaving them later to face it alone. To help students uncover their true interests, ask them to demonstrate a special talent or ability for the class. Explain that it does not matter what they do (within reason), only that they love the activity.

21. **Seek Stimulating Environments**

Help your students develop the ability to choose environments that stimulate their creativity. Although you try to present a stimulating classroom environment every day, your students spend many hours outside of school, eventually graduate, and either stagnate or grow in their creative development. Adults who continue to grow creatively visit and immerse themselves in environments that foster creativity.

To encourage students to develop skills in selecting environments that enhance creativity, choose some environments for the class to explore and help your students connect the environments with the experiences, creative growth, and accomplishment. Show students that creativity is easier with environmental stimulation.

Plan a field trip to a nearby museum, historical building, town hall, or other location with interesting displays and ask your students to generate and examine creative ideas for reports. Read excerpts from a book about a creative pioneer in the discipline being studied or the fieldtrip destination you have targeted-a great paleontologist if the focus is on dinosaurs, or a great astronaut if the focus is on space travel. Get students involved in role-playing.

You cannot reach into every nook of students' lives, nor can you directly control their creative development in the years to come. But give them a lifelong gift by teaching them how to choose creative environments that help ideas flow. Knowing how to choose a creative environment is one of the best long-term strategies for developing creativity.

22. Play to Strengths

Show students how to play to their strengths. Describe your strengths to your students and ask them to declare their strengths. As a group, brainstorm about how best to capitalize on these strengths. Let your students know that they facilitate creative performance by merging talent and preparation with opportunity. By helping students identify the exact nature of their talents, you create opportunities for them to express and use their talents.

Any teacher can help students play to their strengths. All you need is flexibility in assignments and a willingness to help reluctant students determine the nature of their interests and strengths.

23. Grow Creatively

Once we have a major creative idea, it is easy to spend the rest of our career following up on it. It is frightening to contemplate that the next idea may not be as good as the last one, or that success may disappear with the next idea. The result is that we can become complacent and stop being creative.

Sometimes, as experts, we become complacent and stop growing. Teachers and administrators are susceptible to becoming victims of our own expertise-to becoming entrenched in ways of thinking that worked in the past, but not necessarily in the future (Frensch & Sternberg, 1989). Being creative means stepping outside the boxes that we-and others-have created for ourselves.

24. Proselytize for Creativity

Once you have mastered a few of these techniques to develop creativity and made them part of your daily teaching routine, spread the word. The virtues of teaching your students in order to develop their creativity and your own multiply from reinforcement. Make the difference by telling your colleagues, associates, administrators, principal, school board members, and everyone else how important it is to develop creativity in students.

Use examples of creative student work, particularly from students who are not gifted in traditional academic abilities, to demonstrate the difference it makes to teach for creativity. Describe how every student can be reached with patience and a few techniques for developing creativity. Tell your colleagues that student projects are more interesting once students have experienced explicit creativity training. Richer, funnier, wilder, and generally far more interesting assignments, book reports, and projects make our lives less boring.

It is, in fact, a good example of enlightened self-interest for teachers to give students creativity training, because creative students are more motivated and more involved with their schoolwork, and their work becomes more interesting.

If you spread the word about the importance of teaching for creativity in schools, homes, and communities, this approach to teaching will become more common and benefit teachers and students everywhere. Small changes in the way questions are asked, assignments are worded, and tests are crafted can make big differences in the lives of students. We hope that we have provided ideas you can use immediately to start teaching for creativity.

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CHAPTER THIRTEEN

To Touch a Student's Heart and Mind: The Mindset of the Effective Educator

ROBERT B. BROOKS, PH.D.
Faculty, Harvard Medical School,
Cambridge, Massachusetts
Former Director, Dept. of Psychology,
McLean Hospital, Boston MA

I have had the opportunity to visit many schools and speak with countless elementary and secondary school educators throughout our country. I have listened to and learned from their views about education. I have also reflected upon my own experiences as a principal of a school in a locked door unit of a psychiatric hospital and as a consultant to both public and independent schools. My journeys have introduced me to teachers and school administrators who are skilled in touching both the minds and hearts of students, who recognize the importance of focusing not only on developing the intellectual lives of students but their emotional lives as well, and who through word and deed demonstrate a profound commitment to creating school climates in which all students will thrive.

These talented educators possess a mindset that guides their teaching style and their interaction with students and parents and reinforces a spirit for learning. To articulate the main ingredients of this mindset will assist us in imparting information about this mindset to individuals training for careers in teaching as well as experienced educators who are continually seeking to refine their skills. I believe that these ingredients are predicated on commonsense and an adherence to basic principles of human dignity and respect. I know that many of you who are educators are already engaged in practices that follow from the precepts of this mindset so that what I highlight hopefully will be a validation of your existing teaching style.

The following are several of the key components that I believe represent the mindset of the effective educator; space limitations do not permit a lengthier discussion of each of these components nor the inclusion of other components. However, it is my hope that this relatively brief description will provide the reader with a sense of the mindset that I advocate should be learned, embraced, and incorporated by all educators in their teaching activities.

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The Mindset of the Effective Educator: Stress Hardiness Rather Than Stress

On more than one occasion educators attending my workshops have told me that the approach and strategies I have outlined in my presentation resonate with their own beliefs, but they are too stressed out to implement them. At first glance their response seems paradoxical since I emphasize that numerous educators have informed me that the strategies I advocate do not take time away from teaching, but rather help to create a classroom environment that is more conducive to learning and less stressful. Yet, I can appreciate their sense that change requires additional time, a commodity that is not readily available. As a psychologist I have worked with many people who hesitate to leave their comfort zone even when this zone is filled with stress and pressure. They would rather continue with a current known situation that is less than satisfying than engage in the task of entering a new, unexplored territory that holds promise but also uncertainty.

If educators are to be effective and if they are to use many of the ideas described in this article, they must venture from their comfort zone by utilizing techniques for dealing with the stress and pressure that are inherent in their work. I believe that each individual can discover ways of managing stress. For instance, some can rely on exercise, others on relaxation or meditation techniques, all of which can be very helpful. However, in addition to these approaches there has been research conducted by Kobasa and her colleagues (Holt, Fine, & Tollefson, 1987; Kobasa, Maddi, & Kahn, 1982; Martinez, 1989) under the label of stress hardiness that examines the characteristics or mindset of individuals who work in the same demanding environment, but experience less stress than their colleagues. I have termed this mindset the "3C's" since the first letter of each of the words of the mindset begins with the letter "C." As I briefly describe each of these three interrelated components, it is important for the reader to reflect upon how she or he uses or will use this information.

The first "C" represents commitment. Stress hardy individuals do not lose sight of why they are doing what they are doing. They maintain a genuine passion or purpose for their work. While we may all have down days, it is sad to observe educators who basically say to themselves each morning in a resigned way, I've got to go to school. I've got to see those kids. Once a feeling of "I've got to" or being forced to pervades one's mindset, a sense of commitment and purpose is sacrificed, replaced by feelings of stress and burnout. Later in this article I will discuss an exercise I use with educators prior to the beginning of the school year to keep the flame of purpose and commitment glowing.

The second "C" is for challenge. Educators who deal with stress more effectively have developed a mindset that views difficult situations as opportunities for learning and growth rather than as stress to avoid. I remember speaking with a school principal whose school neighborhood had changed in a few short years from a middle class neighborhood with much parent involvement to a neighborhood with a lower socioeconomic make-up and less parent involvement. There were several key factors that contributed to the decrease in parent involvement, including less flexibility for many parents to leave work in order to attend a school meeting or conference as well as many parents feeling unwelcome and anxious in school based upon their own histories as children in the school environment. Instead of bemoaning this state of affairs and becoming more upset and stressed, this particular principal and her staff realized that the education of their students would be greatly enhanced if parents were active participants in the educational process; consequently, they viewed the lack of involvement as a challenge to meet rather than as a stress to avoid. Among other strategies, they scheduled several staff meetings in the late afternoon and moved the site from the school to a popular community house. These changes encouraged a number of the parents to attend the meetings since the new time was more accommodating to their schedules and the new location helped them to feel more comfortable since it was held on their turf. The relationship between parents and teachers was greatly enhanced and the children were the beneficiaries.

The third "C" is control or what I prefer to call personal control since some individuals may mistakenly view control as a form of controlling others. Control, as used in stress hardiness theory, implies that individuals who manage stress and pressure effectively focus their time and energy on what they have control over rather than on things they have little, if any, control over. It has been my experience as a therapist, consultant, and educator that while many individuals believe they engage in activities over which they have influence or control, in fact, many do not. I remember working with a group of teachers who were feeling burned out. I reviewed the basic tenets of stress hardiness theory and asked if they were focusing their energies on factors over which they had control. They replied in the affirmative. I then asked them to list what would help their job to be less stressful. Their answers included, "If the students came from less dysfunctional families, if they came to school better prepared to learn, if they had more discipline at home." After a few moments one of the teachers smiled and said, "We just told Bob that we focus on what we have control over, but everything that we are mentioning to help us feel less stressed are things we have little control over."

After the teacher said this, the group engaged in a discussion about what educators could do to create classroom climates in which students will learn even if they come from home environments that are at present less than supportive of education. One teacher astutely noted, "We are expecting each student to come into school excited about learning and when they are not we get frustrated and annoyed. Instead, what I'm hearing is that we must ask, 'What can we do to help motivate students who are not motivated, what can we do to help students who feel hopeless about learning to feel more hopeful.'" As the discussion continued, the teachers recognized that by focusing on what they could do differently was empowering and lessened stressful feelings. The entire mood of pessimism and burnout that had pervaded the room began to change.

Addressing the Social-Emotional Needs of a Student Is Not an Extra Curriculum Activity

At one of my workshops I was discussing the significant impact that educators have on the social-emotional life of students. A high school science teacher in the audience challenged the emphasis I was placing on social-emotional factors by contending, "I am a science teacher. I know my science and I know how to convey science facts to my students. Why should I have to spend time thinking about the student's emotional or social life? I don't have time to do so and it will distract me from teaching science."

I know that there are many teachers and school administrators who would take issue with the views expressed by this science teacher, who believe as I do that focusing on a student's social and emotional development may be as vital as teaching specific academic skills and content. However, I am also aware that there are many educators who would concur with her opinion. I believe it is unfortunate that a dichotomy has emerged prompting some educators to perceive that nurturing a student's emotional and social well being is mutually exclusive from the task of teaching academic skills. I am convinced based on my own experiences as well as the feedback I have received from many educators that strengthening a student's self-worth is not an "extra" curriculum; if anything, a student's sense of belonging, security, and self-confidence in a classroom provides the scaffolding that supports the foundation for increased learning, motivation, self-discipline, responsibility, and the ability to deal more effectively with mistakes (Brooks, 1991, 1997a).

Empathy Is One of the Most Important Skills of an Effective Teacher

If you were to ask me, "What do you consider to be one of the most vital skills for a teacher to possess?" I would respond, "Empathy." Translated to the school arena, empathy is the capacity of teachers to place themselves inside the shoes of their students and to see the world through the student's eyes. Goleman (1995) highlights empathy as a major component of emotional intelligence.

Being empathic encourages us to ask, "Whenever I say or do things with students, am I saying or doing these things in a way that my students will be most responsive to my message?" For example, a teacher may wish to motivate a student by exhorting the student to "just try harder." While the teacher may be well intentioned, such a comment is frequently experienced in a negative, accusatory way. When students feel accused, they are less likely to be cooperative. Consequently, the teacher's comment will not lead to the desired results. However, if the teacher had been empathic, he or she might have wondered, "If I was having difficulty in my role as a teacher, would I want another teacher or my principal to say to me, 'If you just tried harder you wouldn't have this problem'?"

To highlight the importance of empathy, I have requested educators in my workshops to think of a teacher they liked and one that they did not like when they were students. I then ask them to think of words that they would use to describe each of these teachers. Finally, I say, "Just as you have words to describe your teachers, your students have words to describe you. What words would you hope they used to describe you? What words would they actually use?" Teachers who appreciate the importance of empathy constantly ask these questions of themselves. Most importantly, their interactions are guided by thoughts about how they wish to be perceived and described by their students.

Educators Have a Lifelong Impact on Students and on the Development of Resilience

Effective educators appreciate that what they say and do in the classroom each day can have a lifelong influence on their students. This appreciation of their impact adds meaning and purpose to their work, empowering them and lessening feelings of stress and burnout. In the past 15-20 years there has been an increased effort to delineate those factors that help at-risk youth to overcome adversity and become resilient (Brooks, 1994; Katz, 1997; Werner & Smith, 1992). Schools especially have been spotlighted as environments in which self-esteem, hope, and resilience can be nurtured. For example, psychologist Julius Segal (1988), in describing resilient youth, writes:

From studies conducted around the world, researchers have distilled a number of factors that enable such children of misfortune to beat the heavy odds against them. One factor turns out to be the presence in their lives of a charismatic adult–a person with whom they can identify and from whom they gather strength. And in a surprising number of cases, that person turns out to be a teacher.

A basic belief that resides within the mindset of effective educators is that they have the power to be the charismatic adult in a student's life and they actively seek opportunities to do so. These educators recognize that everything they say and do can have an impact on students, an impact that goes far beyond today or next week or next month. This recognition can increase a teacher's sense of commitment and purpose, one of the basic components of stress hardiness. When teachers appreciate the realistic lifelong influence they have on students (I use the word "realistic" so that educators do not have expectations for themselves or their students that they cannot meet or over which they have little control since this would increase rather than decrease their stress; we must remember that another "C" of stress hardiness is knowing what we have control over), it provides a source of strength.

We must avoid Accusations, Blames and Labels

At the beginning of my career when children did not improve in therapy with me or in the school at which I was principal, I was quick to call them "resistant," "oppositional," "unmotivated," and "manipulative." The use of such pejorative labels basically blamed the very youngsters I was supposedly helping. One of the most significant changes in my own mindset was to begin to accept the notion that whether or not a child benefited from therapy or school had as much, if not more, to do with the style and behavior of the therapist or educator than what the child brought into the situation (Brooks, 1997a). This was a major shift in my thinking since I had been taught initially that resistance was for all intents and purposes a part of one's inner character and would be displayed in all situations. Yet, it was difficult for me to continue to subscribe to this belief as I observed so-called "resistant" and unmotivated students who were very cooperative and motivated with some teachers, but not with others.

I am not implying that we should blame ourselves when we are confronted with a challenging student, but rather instead of blaming the student through the use of accusatory labels, we should ask what is it that we can do differently (let's view things as a challenge and let's focus on what we have "control" over) so that this student might be more responsive and willing to learn. For instance, I recall one student who disliked school, but loved taking care of pets. When he was given the job of being the "pet monitor" of the school, which entailed his ensuring that the pets were cared for, writing a short book with the assistance of his teacher about pet care (the book was bound and placed in the school library), and lecturing in each class of his elementary school about taking care of pets, his motivation to be in school, to write, and to learn increased markedly. He was fortunate to have a teacher and principal who had the courage to change their approach or script rather than expecting him to make the first move. Once they offered opportunities for this student to shine, his seeming "resistance" disappeared.

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All Students Are Different and Learn Differently and We Must Teach Them in Ways in which They Learn Best

There is a plethora of research in the fields of education, developmental psychology, and the neurosciences that have taught us about how every child is different from birth, that children have different temperaments, learning styles and kinds of intelligence (Brooks, 1998; Chess & Thomas, 1987; Gardner, 1983; Hallowell, 1996). Yet, eve n with this research I often hear teachers say, "We must treat all children the same. If we make an accommodation for this student, what will the other students feel? We must be fair." It has been my experience that if at the beginning of the school year school teachers openly explain to their students that we all learn differently and that these differences require the implementation of a variety of accommodations, students will not develop the feeling that the teacher is unfair. What is unfair and is a prescription for frustration and failure is to require students to learn and perform in identical fashion although they possess different learning and temperamental styles.

Some educators have expressed concern that making accommodations will be very time-consuming. However, when I describe the most common types of accommodations I have requested, most educators have remarked that they are realistic and achievable and do not necessitate significant changes in the classroom routine. Some of these accommodations include, but are not limited to: (a) permitting students to take tests untimed, (b) establishing a maximum time for homework each night (the child's parent can verify this), (c) allowing students with attentional and learning problems to have two sets of books, one at home and one at school, to lessen the pressure they experience about the possibility of losing books, (d) providing assignments for the entire week on Monday (or at the end of the previous week) so that parents can help their children to organize their time and work, and (e) permitting students with writing difficulties to use computers for all written work (some teachers still require homework assignments to be handwritten).

Understanding that Students Will Be Most Responsive and Motivated to Learning from Us When We Meet Their Basic Needs

Effective educators recognize that before they attempt to teach a child academic skills or content, their first task is to create a safe and secure environment in which all students will feel comfortable and motivated to learn. One of the foremost researchers in this area has been psychologist Edward Deci at the University of Rochester. Deci's model (Deci & Flaste, 1995), which contains many similarities to the approaches advocated by Glasser (1997) and Brendtro, Brokenleg, and Van Bockern (1990), suggests that students will be more motivated to learn when particular needs have been met. Deci articulates three such needs. They are: (a) to belong and feel connected to the school (I would also add the words "to feel welcome," (b) to feel a sense of autonomy and self-determination, and (c) to feel competent.

An understanding of these needs can serve as guideposts, leading educators to ask such questions as: How do I help each student to feel welcome in my classroom? What choices do I provide my students so that they develop a sense of ownership? Do I incorporate and teach problem-solving skills in all of my activities so that students can learn to make informed decisions? Do I use discipline more as a form of punishment or as a way of teaching self-discipline? That is, do I involve students in helping to create some of the rules and consequences in the classroom? Do I identify and reinforce the strengths of students so that they feel more competent? Do I convey the message from the first day of class that mistakes are part of the learning process, that we can learn from mistakes and not fear them?

Effective teachers constantly pose these and related questions. As they reflect upon these questions they always consider whether they are assisting students to feel welcome in the classroom, whether they are promoting a sense of ownership or autonomy, and whether they are helping students to feel competent. I use a metaphor to capture the need for competence, namely, "islands of competence." I often ask educators to identify, reinforce, and display each student's "islands of competence" as a concrete way of demonstrating that we all have strengths. One of the most effective ways to display the strengths of students is by insuring that each student has a responsibility at school (e.g., tutoring a younger child, helping in the office, painting murals) that highlights the student's competencies (Brooks, 1991). Success begets success. Self-esteem and dignity are based upon true accomplishments and each new accomplishment increases the child's motivation to learn and to take realistic risks.

Parents Are Our Partners, Not Our Adversaries

The mindset of the effective teacher contains ample room for the belief that we must develop close working relationships with parents (Brooks, 1991). I have witnessed far too many situations in which educators and parents have become adversaries and it is the child who suffers. I realize that it is not always an easy task to develop positive parent-teacher relationships, especially when a youngster is having difficulty in school, but it is a very important goal to achieve. I visited one elementary school in which teachers called each parent the day before the new school year began to express their desire to work closely together; they encouraged the parents to feel free to call them with any questions or concerns and they conveyed the wish for a positive relationship during the year. The teachers at the school told me that they initiated this practice of calling parents before school began since they realized that typically the first time they called most parents was when there was a problem–thus, their initial contact centered around a negative issue. They said that communicating with parents in a more positive way enhanced their relationship with parents and, very importantly, had a beneficial effect on the learning and motivation of the students.

Developing an Orientation Session at the Beginning of the Year (but It's Never Too Late) Helps to Create a Positive Mindset for Both Educators and Students

In order to highlight and maximize the mindset of the effective educator I recommend an "orientation period" at the beginning of the school year, a period during which educators are made more aware of this mindset and can use it to create a positive school climate in which all members of the school community feel safe and secure (Brooks, 1997b, 1998). The "orientation period" I envision is divided into two phases. The first takes place a day or two before students arrive and involves exercises that reinforce a positive mindset. During this phase, educators can share with each other why they became educators as a way of recalling the purpose of their work, which is linked to one of the components of stress hardiness, namely, commitment. In addition, I have asked teachers to revisit their past when they were students and to describe a teacher they had who they really liked and a teacher they did not like. I then observe that just as they have words to describe their teachers, their students will have words to describe them. I ask them to think about what words they hope their students will use to describe them, emphasizing that the words students use to describe a teacher will determine how respectful, cooperative, motivated, and self-disciplined students will be and how much they will learn from their teachers. As these descriptive words are recorded educators can discuss what they might say and do during the year to maximize the probability that their students will in fact use favorable rather than unfavorable words to describe them.

Closely linked to this exercise of positive and negative descriptions of our teachers is an exercise related to specific memories we have of school (Brooks, 1990, 1991). I ask educators to share one of their most positive memories of school, a memory that involved something a teacher said or did that boosted their confidence. I also ask them to describe a negative memory involving an educator that diminished their confidence and self-worth. It is impressive to observe the wide spectrum of emotions that are triggered as teachers recall these memories, some of which go back decades, and as they reflect upon how these memories continue to influence their lives years after the events occurred.

I observe that given the indelible nature of these memories and the fact that their students will develop memories of them during the upcoming school year, they should think actively about and rely on their childhood experiences to guide what they do with their students. For example, a fourth grade teacher should think, "When I was in the third, fourth, or fifth grade, what did a teacher say or do that strengthened my self-esteem, motivation, and ability to learn and am I providing the same experiences for my current students?" or "What did a teacher say or do that was hurtful and compromised my ability to feel comfortable and to learn in the classroom and am I making certain I do not do any of these things with my students?" The next question for the staff to consider and discuss is, "What can we do this year to insure that almost all of the memories of our students will be positive and enhance motivation for learning?"

I have been fortunate to work with teachers during this initial phase of the "orientation period" and have witnessed firsthand the excitement that emerges as educators recognize the significant role their teachers played in their lives and how they can do the same for their students. These exercises set a truly positive tone for the new school year.

The second part of the "orientation period" that I advocate is implemented during the first two or three days of school, but it is essential to emphasize that the activities that transpire during these initial days are refined and reinforced throughout the school year. During these first couple of days I actually recommend that teachers refrain from taking out books or reviewing academic content. Instead I believe the time should be used to create a classroom climate in which all students will feel safe and secure and motivated to learn. Although some have questioned if this is a waste of several days of classroom teaching time, it has been my experience that by structuring the first few days to address the needs of students, the students will be more comfortable, more receptive to learning, more involved as active participants in their own education, more capable of dealing with frustration and mistakes, and more respectful and self-disciplined. Just as effective educators must approach their responsibilities with a positive mindset, we must also help to develop a positive mindset for learning in our students.

What are some of the actual activities that can be scheduled during the first few days of school? If we use Deci's framework, we can ask how we begin to meet a student's needs to feel welcome, autonomous, and competent. When teachers quickly learn the names of their students, this helps to establish a sense of feeling welcome. One fourth grade teacher reported bringing in her class photo when she was in fourth grade and using it as a way of discussing what it was like when she was in fourth grade. She said that her students seeing her as a fourth grader immediately created a more personal touch to the classroom environment. In addition, as noted earlier, students will feel more welcome when we teach them in ways that they learn best; thus, during the first couple of days of class educators can openly discuss the different ways we all learn and the importance of accommodations. This open discussion will help students to be more tolerant towards each other and lessen possible feelings that accommodations are unfair.

To promote a sense of ownership or autonomy, teachers can enlist students in helping to create class rules and consequences, especially once a teacher has reviewed nonnegotiable rules. Not only are students more likely to follow rules that they have helped to create, but also in the process teachers can reinforce problem-solving and decision-making skills and, very importantly, nurture self-discipline or self-control, another crucial feature of emotional intelligence (Goleman, 1995).

Since the fear of making mistakes and feeling humiliated is one of the most significant obstacles to learning, I have proposed during the second phase of the "orientation period" that teachers ask their class, "Who in this class thinks that they will make mistakes and not understand something the first time it is taught this year?" Before any student can respond, teachers can raise their own hand and share memories of their anxieties when they were students. They can generate a class discussion about the best ways to insure that students will not be worried about being called upon, of giving a wrong answer, of making mistakes on a test, of not understanding certain material. To verbalize directly the fear of making mistakes typically serves to minimize its potency, thereby creating a classroom environment that feels safe and secure. Within this feeling of security, learning will flourish.

In addition to helping students to feel more competent by lessening their fear of failure, teachers can ask students what they enjoy doing and what they think they do very well. Early in the school year educators can begin to note a student's "islands of competence." Students who excel in art can be enlisted to produce work that can be displayed. Other students can be enlisted as buddies or mentors or tutors for younger students. Various "jobs" can be assigned in the classroom.

It is obvious that there are many worthwhile activities that can take place during the first few days of school, which will set the framework for a school climate in which all members of the school feel excited and motivated.

CHAPTER THIRTEEN

Special Needs or Needing to Feel Special

In ending this brief discussion of the mindset of the effective educator, there is one other ingredient I should like to emphasize that in many ways is interwoven with several of the others. I realize that for a variety of reasons, not the least of which is to secure accommodations and funding, we use the label "special needs." In my conversations with educators who touch the minds and hearts of their students, I am left with the impression that it would be more in concert with their approach if we replaced the term "special needs" with a banner in front of every school in our nation, a banner on which these words were proclaimed, "Every child who enters this school needs to feel special."

I believe that the mindset of the effective educator is motivated to help all students to feel special and appreciated. We can accomplish this by being empathic, by treating students in the same ways that we would like to be treated, by finding a few moments to smile and make them feel comfortable, by teaching them in ways they can learn, by taking painstaking care to avoid any words or actions that might be accusatory, by lessening their fears of failure, by encouraging them, and by recognizing their strengths. When we can achieve these things, we will truly become their "charismatic adults." We will have touched their hearts and minds and in the process they will learn from us and take the gifts of knowledge, acceptance, and resilience into their adult lives. What a wonderful legacy the effective educator bestows upon the next generation.

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CHAPTER FOURTEEN

The Mechanics of Remembering: Tricky Memory and Memory Tricks

GLENDA THORNE, PH.D.
Vice President, Services
Center for Development and Learning
Covington, Louisiana

Imagine life without memories. We would have no identity. We would ask the same questions over and over because we would not be able to remember the answers to them. We would live forever in the present moment and have no recollection of our pasts, including people and experiences that are important to us, and no anticipation of the future.

In his book, *Your Memory: A User's Guide*, Alan Baddeley discusses the case of Clive Wearing who suffered brain damage caused from encephalitis, which led to memory loss. Clive has no long-term memory. He is only able to remember what happened just minutes ago. Thus, he thinks that he has just recovered consciousness over and over ago. When he is presented with evidence of a previous "awakening", he becomes upset and denies the evidence. Clive has lived in what Baddeley calls a permanent present since 1985. He is unable to register change, or to use past events to predict future ones. He does not derive pleasure from reading books because he cannot remember the plot. He is not interested in current events because he cannot remember the context in which they occurred. He becomes lost if he leaves his home.

Memory is crucial for all of us and there is no time during which memory demands are greater than the school years. The school environment is not often a "memory-friendly" one, however. Children are presented with new information throughout the school day and given little opportunity to consolidate this information before other new information is presented to them. What children remember is more often than not used as the yardstick to judge what they have learned. If they perform poorly on a test because they can't retrieve what they know from long-term memory in order to answer test questions, the assumption usually is that learning has not taken place.

Just as there is a relationship between learning and remembering, there is also a relationship between understanding and remembering. If we understand something, we are usually able to remember it better. Understanding enables us to know where to store the information in long-term memory (e.g., what category to place it in), and effective storage usually leads to effective retrieval. Also, if we are able to retrieve previously learned information from long-term memory when we are presented with new to-be-learned information, we can make associations between the two and thus understand the new information better. In this way, memory facilitates understanding. If we think of our long-term memory in our brains as a network of connections, then what we are doing is making new connections between what we already know and what we are trying to learn. And the more dense and complex this network is, the easier it is to store and retrieve new information.

Many school children perform poorly because they do not understand the difference between understanding and remembering. They often think that if they understand something, they will remember it. Think about a joke someone recently told you. It is likely that you laughed when you heard the joke because you understood it; but did you remember it? Could you retell it to someone else? For me, the answer would be an emphatic, "No!" I never remember jokes because I process them at a very superficial level with no intent to store them in my long-term memory.

School children often think that if they understand what their teachers say about some topic or if they understand what they read in their textbooks, they will remember the information. Therefore, they don't need to study much, if at all, for a test because they understood their teacher's discussion or the chapter in their book. This failure to recognize the difference between understanding and remembering often leads to the demise of many students. The students become frustrated and don't know what to do to improve poor test grades. Most of the students that I see clinically tell me that their major study strategy consists of reading over their notes and/or handouts that were given to them by their teachers prior to a test. Some tell me that they don't even do that because they "understood" the information when it was covered in class. Therefore, a prerequisite to making good grades for some students would be to know that understanding the subject matter is not enough; they must also actively engage in activities that will lead to the storage and ultimate retrieval of relevant information from long-term memory.

In the appendix to this chapter you will find a memory self-checklist. Please take a few minutes to complete this checklist before reading further. Completing this checklist will serve two purposes. First, it will give you information about your memory strengths and weaknesses. Second, and probably more important, it will activate some of your prior knowledge about memory.

An easy strategy for activating prior knowledge about a topic that can be used by classroom teachers and parents who help their child at home is to ask the child two questions. The first question ascertains information about what the student already knows about the to-be-presented topic. The second question ascertains information about what the student would like to learn about the topic. For example, if the topic of the day is the American Revolution, students could be asked to discuss what they know about wars. They might know that wars are fought between countries that cannot come to an agreement about some issue, that the opposing sides have major political and military leaders, that the militaries that fight the wars use prescribed strategies or tactics, and so on. Thus, not only does the question, "What do you know about wars?," activate prior knowledge, it also provides a conceptual framework for studying the American Revolution. And a well-defined conceptual framework facilitates understanding of the material as well as the storage and retrieval of information from long-term memory.

Now that you have activated some of your previously learned information about your memory, the following discussion will address memory processes and systems, use of mnemonics in education, metamemory, memory problems of school-age children and general principles for enhancing memory and learning.

Memory Processes and Systems

Memory is generally defined as the processes of encoding, storing and retrieving information. These three processes interact with different memory systems. The scientific study of memory began with Hermann Ebbinghaus, a German philosopher who in the 1880's decided that memory could be studied experimentally. Ebbinghaus was his own experimental subject, and his method was studying memory for sequences of nonsense syllables.

During the 1960's, a number of memory models were proposed by experts in the field. The model proposed by Atkinson and Shiffrin (1968) has been nicknamed the "Modal Memory Model" because it was typical of the others and was probably one of the most influential (Baddeley, 1998). According to this model, there are three memory systems rather than a single memory system: sensory memory, short-term memory and long-term memory. The existence of separate memory systems has been supported by evidence derived from experiments and observations of memory (Baddeley, 1995, 1998; Pashler and Carrier, 1996).

The model of memory that will be presented here is representative of current models; however, the focus of the discussion will be how memory processes and systems relate to performance in the educational arena. The latter is derived from the author's clinical experience in assessing and working with children who have varying profiles of memory strengths and weaknesses, as well as working with parents and teachers of children who have problems in school.

Encoding/Registration

Theories that relate memory to information processing note that remembering begins with encoding or converting information to a form which can be stored by the brain. This process is also referred to as registering information in memory. The memory systems that are involved in encoding or registration are sensory memory and short-term memory.

Sensory Memory. Information which first comes to us through our senses is stored for a very short period of time within the sensory register or sensory buffer. To put it simply, the sensory buffers are associated with our five senses: seeing (visual), hearing (auditory), doing (kinesthetic), feeling (tactile) and smelling (olfactory). However, the sensory buffers that have received the most attention in the research literature are the visual and auditory sensory memory systems.

The visual sensory memory is often referred to as iconic memory. Most estimates of the duration of information in iconic memory note that it remains for approximately several hundred milliseconds. The "image" is similar to an exact replica of the stimulus itself and fades with the passage of time (Pashler and Carrier, 1996). The volume of information that can be held in the visual sensory buffer has not been exactly determined; however, it has been determined that it considerably exceeds the volume of information that can be stored in short-term memory (Averbach and Coriell, 1961; Phillips, 1974, 1983).

The auditory sensory register is often referred to as echoic memory. Typically, it holds information for one or two seconds (Norman, 1969). The subjective experience of echoic memory is different than that of iconic memory. It does not seem to be experienced as a fading "image," but seems to remain intact for a brief period of time. Little is known about its storage capacity, but it appears to be larger than that of verbal short-term memory (Pashler & Carrier, 1996).

Short-term Memory. Most of the information that enters into the sensory registers or buffers is not processed further. The control process that governs which information will be transferred from the sensory buffers to short-term memory, the second memory system, is attention (Gaddes & Edgell, 1994). Information can be held indefinitely in short-term memory as long as it is rehearsed, and the typical cause for its loss is displacement by other information (Pashler & Carrier, 1996). Generally, however, short-term memory is considered to be a temporary resting place for information that is held there for approximately 30 seconds to two minutes.

The amount of information that can be held in short-term memory is relatively small. According to Miller (1956), short-term memory holds seven, plus or minus two, "chunks" of unrelated information. This is the number of digits in most telephone numbers. In order to hold more than seven, plus or minus two, single numbers, the numbers must be chunked. That is, they must be grouped together so that several single numbers are organized into one "conceptual" chunk. For example, the single numbers eight, nine and three could be chunked into one number, 893. Thus, if we were presented with a series of numbers to remember, we could likely recall more if we "chunked" them into groups of two's or three's.

In order to keep information in short-term memory, we must actively process it. This is often referred to as maintenance rehearsal. One maintenance rehearsal strategy is to repeat the information over and over again. We usually use this strategy when we call directory assistance to obtain a telephone number. We say the number over and over to ourselves until we dial it. Then after we dial it, it is usually forgotten. While maintenance rehearsal is effective for holding information in short-term memory, it is not an optimal strategy for transferring information from short-term memory to long-term memory, or for facilitating the storage of information in long-term memory. A more effective strategy for transferring information from short-term memory and for storing information in long-term memory is elaborative rehearsal. A number of elaborative rehearsal strategies will be discussed in subsequent sections of this paper.

There are at least two separate subsystems of short-term memory and some research provides evidence that suggests there may be several more (Pashler & Carrier, 1996). The two subsystems that have been studied the most, and therefore there is clear evidence for their existence, are the visual, often referred to as visuospatial, and verbal, often referred to as phonological, short-term memory systems (Baddeley, 1996; Vallar & Papagno, 1995). Some evidence also suggests we can acquire a special-purpose kinesthetic short-term memory. In a study conducted by Reisberg, Rappaport, and O'Shaughnessy (1984), subjects were trained to code digits as sequences of finger movements. Digit span performance was increased approximately 50 percent using this method.

Short-term Memory and Working Memory. Many researchers in the area of memory propose that working memory is the dynamic and active aspect of short-term memory, and just as there are two subsystems of short-term memory, visual and verbal, there are two subsystems of working memory. These systems are called the phonological or articulary loop and the visuospatial sketch pad (e.g., Baddeley, 1996, 1998; Baddeley & Hitch, 1974; Vallar & Papagno, 1995). Working memory also contains a main controller or central executive that controls on-line attentional processing (Baddeley & Hitch, 1974). It is dynamic and actively interprets newly presented information, as well as integrating the new information with previously stored information (Baddeley, 1996). Information is held temporarily in working memory during the application of procedures, strategies and analyses (Vallar and Papagno, 1995).

Baddeley (1996) proposes that the verbal short-term/working memory system, referred to as the phonological or articulatory loop, relies on encoding in terms of the phonological or sound characteristics of the material. His argument is based on the fact that when memory span for items that are similar in sound (e.g., mad, map, can, man, and cap) are compared with memory span for items that are dissimilar in sound (e.g., pit, day, cow, pen, and bar), the list of similar items are less likely to be correctly recalled. His explanation for this is that because the items are encoded in terms of sound and they have fewer distinguishing sound features, they are more difficult to accurately retrieve. When a list of to-be-recalled items are similar in meaning (e.g., large, big, huge, long, and tall), this same kind of confusion is not found, thus suggesting that encoding in the verbal short-term memory system is phonological and not semantic (Baddeley, 1966).

The short-term memory system which retains visuospatial information has been investigated less than the verbal or phonological system (Vallar & Papagno, 1995). Research actually suggests that separate visual, spatial and visuospatial subsystems may exist (Farah, Hammond, Levine, & Calvanio, 1988). Baddeley (1992) argues that visual and spatial information are stored separately because brain-damaged patients might be unable to perform tasks that require spatial processing, but are able to perform tasks that require only visual processing and vice versa.

Long-term Memory Storage

Just as the sensory and short-term memory systems are associated with the process of encoding or registering information in memory, the long-term memory system is associated with the processes of storage and retrieval of information from memory. Long-term memory storage is considered to be relatively permanent. The loss of information from long-term memory is referred to as forgetting. During the 1950's, there was a good deal of research that focused on the issue of forgetting and whether it was simply due to the passage of time, that is, the memory trace eventually decayed over time, or whether it occurred because new learning interfered with old learning (Baddeley, 1996). Studies have shown that the storage of new material in memory is disrupted by both prior and subsequent learning. When storage or consolidation of newly learned material is disrupted by prior learning, the phenomenon is referred to as proactive interference. When subsequent learning disrupts the consolidation of information in memory, the phenomenon is called retroactive interference. Both of these phenomena are important to consider for optimal learning in the school environment.

During the normal school day, students are presented with new information, or at least, partially new information, usually every 45 to 60 minutes. A child may have a 45-minute math class during which the process for adding fractions with like denominators is introduced. Then, before this information has had time to consolidate in long-term memory, the student moves on to science where the process of photosynthesis is introduced. This situation produces fertile ground for proactive and retroactive interference to disrupt the storage of new knowledge in long-term memory. If proactive interference occurs, the introduction of the process of addition of fractions will interfere with the learning of the process of photosynthesis. If retroactive interference occurs, the introduction of the process of photosynthesis will interfere with the learning of the process of addition of fractions.

Thus, the phenomena of proactive and retroactive interference in long-term memory storage provide good rationale for what is commonly referred to as "block scheduling". With block scheduling, students have approximately four classes of 90 minutes each. If teachers use the 90 minutes wisely (i.e., they do not simply lecture for 90 minutes instead of 45 minutes), they can provide students with opportunities to engage in activities that will actually enhance the consolidation of the new to-be-learned information in long-term memory. For example, the teacher who has just introduced the process of photosynthesis could have her students conduct an experiment which would demonstrate the process of photosynthesis.

Proactive and retroactive interference also provide rationale for curricula that crosses different disciplines. For example, students studying the Roman Empire in social studies would also study artists of the Roman Empire in their art class and the advanced scientific inventions of the Romans in their science class. By doing this, there will be some redundancies in and reinforcement of the information and more "hooks" in memory on which to hang the new knowledge.

Long-term Memory Subsystems. Just as it was once thought that short-term memory was one system, long-term memory was also considered to be a single system. However, we now know that long-term memory is comprised of a number of interrelated subsystems. Squire (1991) makes a distinction between declarative (sometimes referred to as explicit) and nondeclarative (sometimes referred to as implicit) memory systems.

Tulving (1972) further delineated the declarative memory system into two subsystems - episodic and semantic memory. Episodic memory is the memory system that stores information about the "episodes" or events in our lives; remembering what we did during last summer's vacation; who our favorite teacher in school was; who was at Aunt Martha and Uncle Harry's anniversary celebration. Episodic memory is readily disrupted by brain damage and its impairment is the basis of classis amnesic syndrome (Baddeley, 1996).

The second declarative memory system, the semantic system, refers to the memory of knowledge and concepts. Formal education can be thought of as filling up our semantic memory "store". Facts such as the rules for capitalization and punctuation, what year Columbus discovered America and who Susan B. Anthony was are examples of the kinds of information that are stored in the semantic memory system. The task demands for semantic memory in the school setting are unceasing.

Individual differences exist in the effectiveness of both the episodic and semantic memory systems (Bors & McLeod, 1996). For example, my husband and I differ greatly in our ability to store and thus retrieve information in these two memory subsystems. We frequently travel and he is able to remember in vivid detail the places we go and what we do and see. I, on the other hand, rely on pictures for my memory storage bank. In fact, I usually own the job of putting our vacation photographs in albums and I sometimes have to ask him where we were when certain pictures were taken. We were once taking a Saturday afternoon drive in Mississippi and he asked me if I remembered going to a certain restaurant. I had absolutely no recollection of this experience, none, and he could even remember what we had to eat. My husband's semantic memory for some things, however, is just as unreliable as my episodic memory. For example, he asks me our sons' telephone numbers over and over and over again. And, it took him several years of marriage to remember that our wedding anniversary was the 28th of October, not the 26th.

Many children who struggle in school have relative weaknesses with their long-term semantic memory system. The parents of many children I work with tell me that one of their child's strengths is his good memory. These same parents also often tell me that their child has difficulty remembering what he has just read or what his homework assignment is. When I ask them for examples of their child's "good" memory, they almost always tell me that their child can remember some event that took place years ago or what they did when they went to grandma's house two summers ago. Thus, these children often have quite good episodic memories, but unreliable semantic memories.

Individual differences in semantic and episodic memory provide good rationale for the need for teachers to use multiple, varied learning activities in the classroom, such as projects, group work and field trips. These provide an "episodic" or experiential context within which to place semantic information.

While Tulving proposed that semantic and episodic memory systems were separate systems, evidence provided by current research seems to suggest that the systems are the same, but operate under difference circumstances. Baddeley's (1996) view is that "semantic" memory consists of the accumulation of many episodes. A useful analogy is to think of a series of individual episodes being piled one on the other; episodic memory represents the capacity to pull out one episode from the pile, whereas semantic memory reflects our capacity to look at the pile from above, and draw out those features that are common to many of the constituent episodes (p.17).

Thus, Baddeley's conceptualization of how these two declarative memory systems interact suggests that hands-on and experiential activities will enhance learning and remembering.

The long-term nondeclarative memory subsystem proposed by Squire (1992) consists of four components: 1) skills and habits, 2) priming, 3) simple classical conditioning and 4) nonassociative learning. The learning of skills, both perceptual-motor and cognitive, is referred to as procedural learning. Perceptual-motor skills are those such as driving a car, bike-riding and swinging a golf club. Cognitive procedural learning involves skills such as reading and problem solving. While semantic learning can be thought of as storing knowledge of "what," procedural learning can be thought as storing knowledge about "how" (Baddely, 1996).

Priming refers to the phenomenon that once an object has been perceived or processed, its subsequent perception is easier (Baddeley, 1996). There is evidence that priming exists along two dimensions: perceptual and conceptual. Studies of perceptual priming have shown that reading passages that contain certain words without drawing attention to the words enhanced memory for the words in later learning trials. Studies of conceptual priming have shown that discussing a topic prior to a learning situation can create a bias. For example, in one study, subjects had a conversation about musical instruments and were then given a task which required them to complete a word fragment. Those who had been exposed to the conversation about musical instruments more often than not completed the word fragment with the word "reed" instead of "read."

The phenomenon of priming in memory and learning has relevance in the educational environment, particularly with regard to the use of advance organizers prior to the presentation of new to-be-learned information. Advance organizers might include reviewing the vocabulary prior to reading a chapter or book, reading the objectives at the beginning of chapters and/or the questions at the end of chapters prior to reading the chapters and discussing the to-be-learned material prior to having students read about it.

The final two components of Squire's (1992) model can be placed under the general conceptual category of conditioning: simple classical conditioning, or what has been referred to as associative conditioning, and nonassociative or evaluative conditioning (Baddeley, 1996, 1998). Classical conditioning was demonstrated in the classic study conducted by the Russian physiologist Ivan Pavlov. Pavlov discovered that after the ringing of a bell had been repeatedly paired with the presentation of food, dogs subsequently began to salivate when the bell was rang as they had to the presentation of food. Classical conditioning is important in understanding many of our emotional responses to certain stimuli. For example, I completed my graduate work in psychology at Louisiana State University. The psychology department is on the second floor of Audubon Hall; however, the rooms that are used for defense of theses and dissertations and for general doctoral exams are on the first floor of the building and because of the age of the building, it has a distinctive but normally inoffensive aroma. After completing my graduate work there, I returned to Audubon Hall and immediately upon opening the door and entering the first floor, I felt sick to my stomach. The anxiety that had been associated with my thesis and dissertation defenses and oral doctoral exam had been paired with the distinctive odor in Audubon Hall, a previously neutral stimulus. Thus, when I entered the building, the previously neutral odor elicited the same anxiety response that had originally just been associated with these anxiety-producing experiences. This is a simple case of a classically conditioned emotional response.

Many cases of school avoidance and phobia can be explained by classical conditioning or associative learning. For example, consider the case of the child who is rejected by her peers, embarrassed or humiliated by a teacher and/or experiences chronic failure in school. These normally stressful, anxiety-evoking events are paired with the physical surroundings in the school environment. After repeated pairings, even the thought of going to school may cause a child such anxiety that she hides under her bed on school mornings, acts out in other ways or refuses to attend school in spite of the consequences. And what most often happens to these children is that we adults say they have "emotional" problems. Well, indeed they do; but their emotional responses are perfectly "normal," given their history of experiences. If we want to help their "emotional" problems, we need to change the anxiety-evoking situations that take place in school. Most of the children I work with do not display overt phobias for school; however, many of them don't like school, don't feel comfortable there, dread going and are happy only during the summer months when there is no school. The wear and tear of their repeated struggles and lack of success is poorly understood and they are frequently labeled "lazy," "unmotivated" and/or "disturbed," and blamed for their plight. In these cases, they are not served well by their associative memory. In Priscilla Vail's book *Emotion: The On Off Switch for Learning*, she states that "emotion functions as that switch, either closing or opening the pathways to thinking and learning" (p.1). Thus, for optimal thinking, learning and remembering to take place in school, it is critical that schools are both physically and psychologically safe places for children to be.

Nonassociative or evaluative learning refers to the influence that prior experience has on whether a stimulus is subsequently experienced as positive or negative. In general, we favor familiar stimuli over unfamiliar stimuli (Baddeley, 1996, 1998). This may account for why many of us do not like change, even when it is ultimately for the better. This concept is important for the classroom teacher who is introducing students to learning activities that they have not had experience with. Many students may initially resist simply because it's an unfamiliar situation for them. It may be helpful to reassure them that their initial discomfort will likely diminish.

In summary, long-term memory consists of two systems: declarative and nondeclarative. Declarative memory can be further delineated into the episodic and semantic systems. The nondeclarative system includes skills and habits (i.e., procedures), priming, simple classical conditioning and nonassociative learning. The characteristics and functions of each specific memory system have important implications for learning and the educational setting.

Imagery and Visual-Spatial Representations in Memory. The ancient Greeks documented the functional role of mental images and visual-representations in memory. In fact, one memory strategy that uses both imagery and visual-spatial representations, the method of loci, was first used by Greek and Roman orators to help them remember their long speeches. They associated each part of the speech with a location in their home. These locations were referred to as "loci." The opening part of the speech was perhaps associated with the front door, the next with the foyer, the third with a piece of furniture in the foyer, and so on. When the orator wanted to recall his speech, he would take a mental walk through his home recalling the thoughts that he had associated with the different places in his home. This is where the saying, "in the first place" actually originated (Lorayne & Lucus, 1974). The evidence that forming mental images can enhance performance on a variety of memory and learning tasks is abundant (Bower, 1972). In fact, we know that good readers make mental images or "running movies" in their heads as they read to facilitate comprehension (Bell, 1991).

Much of our memory of events, situations and people from our past occurs through nonverbal thinking or visual-spatial representations. For example, if you think of the birthday when you were given your favorite-of-all-times bike, you likely recall the visual image of your bike, remembering its color and other features. You might have a mental picture of how it was given to you: your parents rolled it into the living room or they blindfolded you and led you to the garage. Images and visual-representations differ from verbal or abstract representations in memory (Cooper & Lang, 1996).

Research in cognitive neuroscience suggests that mental images of objects retain the same physical features as the object itself. For example, if the object is four inches long, three inches wide and six inches in depth, the mental image of the object in memory retains these same relative dimensions. We can also mentally rotate or transform the objects in the same way that we can physically rotate or transform them (Cooper & Lang, 1996). This ability to mentally transform objects likely accounts for some of an individual's capacity to engage in nonverbal reasoning.

Long-term Memory Retrieval

Retrieval refers to the phenomenon of accessing information that has been stored in memory (Melton, 1963). The process of retrieval is intertwined with those of encoding and storage. How well information is encoded and stored in memory determines how likely it is to be accessed or retrieved. In addition, information and events that are stored with the new to-be-learned information, often referred to as cues, effect the ease with which information can be retrieved as well as the manner in which retrieval is likely to be optimal (Roediger and Guynn, 1996).

Until the 1960's, the retrieval stage of memory was largely ignored. Researchers who investigated memory assumed that if information was unable to be recalled, it was due to inadequate encoding and/or storage in long-term memory. It was rarely assumed that the "forgotten" information had been encoded and stored, but that the breakdown was actually in the inability to retrieve or access it in our memory storage bank. Currently, many psychologists believe that retrieval processes are crucial in determining how well information can be remembered or recalled (Roediger and Guynn, 1996).

One method that was frequently used by early researchers to study retrieval or access of information from memory was to present subjects with information and then give them repeated tests on this information without allowing them to study the information in between tests. The results obtained by a study conducted by Brown (1923) showed that subjects were able to recall more items on the second retrieval trial than on the first retrieval trial. Additionally, there were some items that were recalled on the first trial, but were forgotten on the second trial.

The results of this study and many other subsequent ones have important implications for students and educators. First, they suggest that a simple test of memory is not a perfect indication of the acquisition of knowledge. If students are given a second identical test, even within a short time period after the first test, they may not exhibit the same pattern of recall. They might sometimes remember more information on the second test than they did on the first, or they may remember less information on the second test than they did on the first, or they might remember different information on the second test than they did on the first one. Additionally, the results from these studies show that the simple act of merely retrieving information from memory (i.e., retrieval practice) can facilitate or enhance memory of to-be-learned information. Therefore, while we often focus on encoding practice (what traditionally comprises studying), it is just as important to provide opportunities for students to engage in retrieval practice.

A phenomenon associated with retrieval practice, the testing effect, has implications for educators. Studies investigating the testing effect have shown that retrieval practice from taking a test actually produced greater gains in later retention than did another presentation of the material for study (i.e., encoding practice) (e.g., Hogan and Kintsch, 1971;Tulving, 1967).

Retrieval practice for students can be conducted in several ways. One way that is commonly used by teachers is reviewing information prior to testing. But review should not only consist of the teachers' summaries of the information covered, it should also require students to answer review questions asked by teachers. Another way in which students may engage in retrieval practice is to make up their own tests, and then answer the questions on their self-made test. This exercise serves other functions as well. It provides the student with an opportunity to make judgments about what information is most important (i.e., what is most salient: an important component of the attention process), and it provides an opportunity for encoding practice because the students must read or discuss the to-be-learned information. A third way to engage students in retrieval practice is to have them ask questions to each other when studying together or to have a parent, family member or tutor ask them questions about the to-be-learned information. Of these strategies, the one that I have observed to be the most effective is that of making and taking self-tests.

A second method that has been used to study retrieval of information is called the cued recall paradigm. This method generally consists of first exposing two groups of subjects to identical encoding and storage conditions, and then exposing the two groups to different retrieval conditions (Roediger and Guynn, 1996). In such a study conducted by Tulving and Pearlstone (cited in Roediger and Guynn, 1996), students were presented with two words in 24 different categories for a total of 48 words. For example, they might be given "articles of clothing" for a category and the two words in this category might be "blouse and sweater." The next category might be "types of birds" and the two words in this category might be "crow and parakeet." This condition was the encoding and storage condition and was the same for the two groups of subjects. For the retrieval conditions, one group of subjects was simply given a blank sheet of paper and asked to write as many words as they could remember. This was called the "free recall" group. The subjects correctly recalled an average of 19.3 words. The second group of subjects was given the 24 category names and asked to write as many words as they could remember. This was called the "cued recall" condition. The average number of words correctly recalled in this condition was 35.9. This study highlights the distinction between long-term memory storage and retrieval. When the encoding and storage conditions were identical, retrieval cues almost doubled the number of words subjects could recall.

The research findings for cued recall studies also have important implications for students and educators. They show that the specific information that is presented with the to-be-learned information can be used as cues to facilitate access or retrieval of this information. They also highlight the difference between testing methods that can be grouped under the general descriptive categories of recognition and recall tests. For example, essay tests are generally considered to be recall tests, whereas, multiple-choice tests are usually considered to be tests of recognition. Further, a fill-in-the-blank test with no word bank is a test of recall, but the addition of a word bank makes it a recognition test.

A second implication of the cued recall paradigm for educators is that new to-be-learned information should be presented with many cues so that its retrieval is enhanced. These cues can take the form of many of the activities that have been previously discussed, such as activating prior relevant knowledge, placing information within conceptual categories, making information personally relevant, and/or presenting information within an experiential context. Thus, not only are these important activities for encoding and storage, they are also crucial for optimal retrieval of the learned information.

According to Baddeley (1996), recognition usually leads to more accurate retrieval of information than recall does. This is because the word or information that has been learned actually serves as a cue, facilitating or enhancing access to its memory trace. For example, if a student is presented with the question, "What is the region of the brain that controls vision," this is a recall task. If a word bank is provided and the student reads the words "occipital lobes" from the list, these words are likely to facilitate access to the memory trace that contains the information, "the region of the brain that controls vision is the occipital lobes." Thus, the difference between performance on recognition and recall tasks may be used to help determine whether a particular instance of memory failure is likely due to a breakdown in encoding and storage or to a breakdown in the ability to retrieve the information because retrieval deficits are often diminished with recognition testing (Baddeley, 1996). An important phenomenon for educators when using retrieval cues, however, is referred to as the cue overload principle (Earhard, 1967). This principle states that the likelihood of recalling items associated with any specific category (i.e., cue) is reduced as the number of items in that category is increased. For example, Roediger (1973) varied the number of items in any one category from four to seven and found that recall decreased as the number of items in each category increased.

A second, more sophisticated method of studying retrieval processes in memory is referred to as the encoding/retrieval paradigm (Roediger and Guynn, 1996). With this method, both the encoding and retrieval activities are manipulated. This paradigm was used by Thompson and Tulving (1970) when they proposed the encoding specificity hypothesis, and it has been used to study context-dependent memory and state- and mood-dependent retrieval. The encoding specificity principle states that in order for retrieval cues to be effective in facilitating the recall of information, they must have been present when the learning took place. This principle was broadened by Bransford, Franks, Morris and Stein (1979) when they proposed the concept of transfer-appropriate processing. According to Bransford et al., performance on a test of memory is actually the transfer of information from the original learning situation to the later test situation. That is, it was learned during one situation and then transferred to the testing situation. They state that transfer is more likely to take place when the activities that occur at the time information is encoded match those that occur at the time the information is retrieved (i.e., encoding activities match retrieval activities). The information derived from the encoding specificity hypothesis and the concept of transfer-appropriate processing provides us with insight for understanding why test performance (i.e., memory of the to-be-learned information) may be enhanced for students when teachers' study guides (encoding activities) are the same format as their tests (retrieval activities).

The research on context-dependent memory, the idea that our environment or physical context influences memory has yielded inconsistent results. Godden and Baddeley (1975) had divers learn lists of words while underwater. They then conducted recall trials both underwater and on the beach. Results showed that the divers who learned the list of words while underwater were able to recall 40 percent more of the words when they were tested underwater than when they were tested on land. When a recognition rather than a recall task was used, however, this difference disappeared. This finding suggests that context has its greatest influence on memory via the retrieval versus the encoding and storage stage.

Saufley, Otaka and Bavaresco (cited in Roediger & Guynn, 1996) conducted a study of context-dependent learning using a naturally occurring context manipulation and found different results. These researchers tested students at the University of California who were enrolled in an introductory psychology class over a three-year period. Students were randomly assigned to either 1) take their exams in the main lecture hall where they had been taught or 2) take their exams in smaller overflow classrooms. No differences were found in test performance between the 3613 students who took the test in the same room and the 2412 who took the test in a different room. However, it is important to note that all tests taken by students were multiple-choice formats (recognition memory), not free-recall formats.

Studies examining state-dependent retrieval have also found encoding/retrieval interactions. Research on state-dependent retrieval involves manipulating the subjects' internal state, usually in the form of changing the pharmacological state or the mood state of the individual. Roediger and Guynn (1996) provide a good discussion of state-dependent retrieval. According to these authors, the study of state-dependent retrieval arose from the clinical observations of mental health professionals who worked with alcoholics. These professionals found that sometimes alcoholics would perform some act, such as hiding a paycheck, when they were under the influence of alcohol and then when they became sober, they were unable to remember the act. Later, when the alcoholic drank again, he was able to remember where he had hidden the paycheck.

Later research on state-dependent learning produced mixed results with some showing support for the phenomenon and others not. After many studies, it is generally concluded that state-dependent retrieval occurs under free recall conditions rather than cued recall conditions. Thus, it appears that drug states can serve as retrieval cues, but these cues are overshadowed and their effects eliminated by more powerful overt cues such as category names (Roediger and Guynn, 1996). Additionally, Eich (1980) found an effect for state-dependent retrieval when memory was tested by a recall task, but not when memory was tested by recognition.

Studies of mood-dependent learning have yielded less consistent results than those of state-dependent learning (Baddeley, 1996). In general, however, there appears to be what is referred to as a mood-congruency effect. That is, when an individual is in a depressed mood, it is easier for her to recall sad memories and when she is in a happy mood, it is easier for her to recall happy memories (Williams, Watts, McLeod and Matthews, 1988).

The Use of Mnemonics in Education

With the increasing focus on higher order thinking in education, the word "memorization" has become distasteful and the act of memorization something that is undesirable. Memorization, however, is necessary in the early stages of learning. For example, if students are to engage in thinking about the implications of war for civilization, they must first know something about specific wars, such as why they were fought and what the short- and long-term consequences were. Memorization of facts and knowledge provides the scaffolding for higher order thinking to occur. For example, if we are to become experts in any certain field, we must first learn (memorize) the technical vocabulary of that field. According to Belleza (1996), mnemonic learning might serve as a useful way of getting information into long-term memory when children do not possess a knowledge base that is relevant to the topic being studied. With continued learning, the scaffolding provided by the use of mnemonic methods may be forgotten as students come to rely more on relevant associations when remembering. When mnemonics are used during encoding of information, they may provide visual imagery or verbal elaborations that act as cues for recalling information that is low in imagery or in meaningfulness. Visual imagery mnemonics can be ones that learners generate themselves when instructed to form mental pictures to make the material presented to them more memorable, or they can be actual pictures they have been provided with to enable them to form images from what they actually see rather than from what they imagine (Belleza, 1996). Mastropieri and Scruggs (1991) found that the presentation of teacher-supplied pictures enhanced learning for students with learning disabilities.

Belleza (1996) discusses several ways in which mnemonic methods can be used in the classroom. First, school children can be taught to generate their own mnemonic devices which they can spontaneously use to help them remember information presented in their classes. Second, mnemonic methods can be induced by instructing children to use a mnemonic strategy to remember a specific set of information prior to its presentation. Third, the teacher can impose mnemonic elaboration upon the student by visually presenting an elaboration (e.g., a picture or drawing) that will both encode the information and organize it in memory. Bellaza makes a distinction between mnemonic strategies and mnemonic materials. When learners are using mnemonic strategies, they create their own mental cues to aid in remembering. The use of mnemonic material involves presenting students with the mental cues that they use to enhance their memory of the to-be-learned information.

Metamemory

A discussion of memory-related issues for the educational setting would not be complete without presenting the topic of metamemory. Metamemory refers to knowledge about how one's own memory processes work. It is important for school children to identify and understand their own memory profile: their memory strengths and weaknesses. Metamemory can be thought of as a component of metacognition or knowing about knowing. Students need to be taught the difference between understanding information and remembering it. They need to know general information about memory such as that encoding activities affect subsequent storage and retrieval of information, that retrieval practice is as important as encoding practice and that elaborative rehearsal is more effective than maintenance rehearsal. They also need to know specific information about their own memory profiles such as that their episodic memory system may be better than their semantic memory system or vice versa, and that their visual memory may be better than their auditory memory or vice versa. Human beings have an innate propensity for learning; thus, knowledge of general memory principles as well as individual memory strengths and weaknesses should enhance learning for students and, thus, make school a more rewarding place for them to be.

Memory Problems of School Children

Students who have difficulty with memory may have deficits in encoding or registering information in memory, in storing or consolidating information in long-term memory or in retrieving or accessing information from long-term memory

Problems with Encoding Information in Short-term Memory

In order for information to be encoded in memory, it must first be attended to. Thus, children who have deficits in attention often have trouble with this first memory process. Many children and adults with attention deficits report that they have trouble remembering events that took place within the past 24 hours. Students also often have "gaps" in their knowledge of basic skills because they tune in and out in the classroom. They are often reluctant to engage in tasks, such as schoolwork and homework, which require sustained mental effort. Even when children with attention deficits attend to the appropriate information, they may only attend at a very superficial level. Therefore, they fail to elaborate on the incoming information. They do not activate prior knowledge and relate it to the to-be-learned information. For example, if a student is reading about the Battle of New Orleans, he may fail to retrieve information he already knows about war, New Orleans or Andrew Jackson from his long-term memory store. If a student is introduced to a new math procedure such as the multiplication of four-digit numbers by three-digit numbers, she may not retrieve information she already knows about the multiplication process. This failure to sufficiently elaborate on incoming information often results in deficits in long-term memory storage and retrieval.

Students who have deficits in encoding information in memory may have trouble remembering directions or what they have just read. They may also have trouble remembering what their teachers said during class lectures. Further, they may have trouble remembering what others said during conversations. Their deficits may be more pronounced in certain sensory systems or modalities, such as visual, auditory or kinesthetic. Most of the children I see in the clinic who are having school problems have relative weaknesses in their auditory short-term memory, and because much of the information that is presented in the classroom is presented in an auditory/verbal format, this weakness leads to significant functional problems for them.

Often children who have encoding deficits fail to use memory strategies. For example, they may not form visual images when reading. They may not "chunk" or recode incoming information into semantic or meaningful units.

Problems with Working Memory

In a previous section of this chapter, I discussed the fact that working memory is generally conceptualized as part of the short-term memory system. However, for practical purposes for understanding school children's memory problems, it is useful to think of it as a separate functional component of memory. The simplest way to think about working memory is to think of it as remembering what we are doing while doing it. Just as individuals who have attention deficits have problems with encoding incoming information in memory, they also often have deficits in working memory. Deficits in working memory may be manifested in a number of ways in the school setting. Students may have trouble with following through on directions even if they understood them. They may have trouble with solving math calculation problems that involve multiple steps, such as long division or problems in algebra, because in order to solve these problems they need to access information about math facts from long-term memory while remembering what they have just done and what they need to do next. They often have tremendous trouble with word problems in math because they are unable to keep all the information on their mental "plate" while they are deciding what information is most relevant and what process they need to use to solve the problem. They may have functional problems with reading comprehension because they fail to remember the sentences they just read while reading the sentence they are reading. Writing composition is often an arduous task for them. It requires them to retrieve their ideas from long-term memory while simultaneously recalling rules about capitalization, punctuation and grammar and writing their ideas down. In class, they must remember what their teacher has said while taking notes. They must remember the teacher's questions while searching long-term memory for the answer. If they are looking up a word in the dictionary, they must remember the word while looking it up. Similarly, when they are answering questions in the back of their textbook chapters, they must remember the question while searching the chapter for the answer. Thus, the demands on working memory not only for school children but also for all of us are endless.

Problems with Long-term Memory Storage

Deficits in the encoding process lead to problems with consolidation or storage of information in long-term memory. If incoming information is processed at an insufficient depth, that is, if the student does not engage in active elaboration by connecting the to-be-learned information to prior knowledge and/or placing it in some conceptual category, it often is not adequately stored.

Students who have deficits in long-term memory storage frequently rely too much on rote memorization. This strategy may be adequate for keeping information in short-term memory, but it leads to poor storage in long-term memory. If we think of our memory as a network of connections, when we place something in this network, it is best if we have multiple pathways to access it. One way to create multiple pathways is to place the to-be-learned information in several categories. For example, if the class is studying alligators, a student who actively elaborates by categorization would think about the alligator he saw in the reptile house at the zoo and would categorize alligators as reptiles. He might think about the Honey Island Swamp Tour that he went on with his family and categorize the alligator with "things that live in swamps." Further, he may have eaten alligator soup and categorize it with "unusual things to eat." If new information is not categorized, there are not multiple pathways through which to reach it, thus recall may be very slow and sometimes impossible.

Students who have deficits in long-term memory may also have trouble with recalling what the memory research literature has called paired associates. Paired associates are two entities that "hang together." For example, a name and a face are paired associates. Other examples of paired associates are states and their capitols, countries and their continents, language sounds and language symbols, vocabulary words and their definitions and historical events and the dates they occurred.

Additional storage deficits in the semantic memory system include problems with remembering rules, such as rules of grammar, punctuation and capitalization. They might have trouble remembering spelling rules or the rules for sounding out words.

Deficits in memory storage may be more problematic for information in certain modalities or formats. We know that we have both auditory and visual short-term memory systems. We are also able to store information in visual, spatial and visual-spatial formats. Thus, we may have specific deficits for storing information in each of these formats. Because my own visual short-term memory is poor, my long-term storage of visual information is also poor. As I confessed earlier in this chapter, I am often unable to remember where certain pictures were taken during vacations.

Deficits in categorization or storage of paired associates fall under the conceptual umbrella of the declarative semantic memory system. Students who have deficits in memory storage may also have trouble with storing information about events or episodes in their lives. For example, they may have no recollection of what they ate for lunch earlier in the afternoon. They may not remember that they went to the zoo while visiting their grandmother last summer.

Deficits may also occur in the storage of information in the nondeclarative memory system, especially with memory of skills or procedures. For example, children may insufficiently store the cognitive procedures for solving long division or algebraic problems in math. They may not adequately store the motor procedures for writing letters, for tying their shoes or for riding their bikes. These latter skills also involve the haptic or kinesthetic memory system.

Problems with Long-term Memory Retrieval

Children who have deficits in the retrieval of information from long-term memory more often than not receive grades that do not match the time and effort they spend in study or preparing for tests. These children and their parents frequently tell me that the students "knew the information the night before the test, but could not remember it when taking the test." Students who have trouble with memory recall often report "test anxiety." Test anxiety is also often a common complaint of many students who have attention deficits. The two frequently co-occur.

The inability to rapidly and efficiently recall information from long-term memory when it is needed may be associated with deficits in encoding and storage of information. Thus, any of the problems discussed in the previous section (failure to categorize, failure to store paired associates, trouble with the storage of rules, trouble with storing information presented in specific modalities or formats, difficulty with storing information associated with life events or episodes and problems with storing information for performing skills and procedures, both cognitive and motor) will lead to deficits in memory retrieval. If categorization of to-be-learned information is weak, the pathways through which to access this information will be limited and, thus, retrieval will be slow and difficult. If one piece of information that "hangs" with another is unable to be efficiently retrieved, school is likely to be an uncomfortable place to be (e.g., a student remembers his teacher's face, but is unable to recall her name).

Often students who have trouble with recalling rules, especially those in written language, may perform adequately when writing single sentences. However, when they are required to write paragraph or story length text, their performance deteriorates. They misspell words, fail to place punctuation where it belongs and/or do not capitalize words that should be capitalized. In fact, it is often possible to differentiate storage and retrieval problems by examining a student's work both at the sentence and the paragraph levels.

Students who have trouble with the storage of information presented in specific formats also have weaknesses with the recall of information in this same format. For example, a student may be really good with remembering the names of all of the states and their capitols (paired associates), but she may never be able to remember their exact location on a map because this information is in a visual-spatial format. This same student's recall may be greatly enhanced by having her put together a big spongy puzzle of the United States or walk from state to state on a big rug or carpet that has a picture or drawing of the United States on it, thereby engaging the haptic or kinesthetic memory system. Some students have great memories of spatial arrays, but poor memories of sequences of events, such as the chronological order of events in history.

Deficits in the recall of events or episodes may manifest themselves through failure to recall what was said during social conversations or what was done while on a field trip. Students who have problems with the recall of skills or procedures may forget or skip steps when solving math problems. They might forget how to form letters when writing. Some of the children I work with will ask questions such as, "How do you make the letter k" when writing.

In addition to deficits in recall, students may have trouble with recognition of information in memory. For example, some of the students I evaluate have trouble with math because they do not, among other things, recognize patterns in math problems. Thus, every problem is like a new problem to them because they do not see the similarities between the one they just solved and the new one. This deficit is often associated with what some teachers and parents call "math anxiety." Children with pattern recognition problems may also fail to perceive reoccurring themes in stories.

General Principles for Enhancing Memory and Learning

There are several general principles gleaned from the research that can be applied in the academic setting for enhancing memory and learning. They are summarized below.

1. *Understanding and Remembering:* Students need to be taught the relationship and differences between understanding and remembering. That is, they need to know that simply sitting in class and understanding the information their teachers present in discussions and/or lectures or understanding what they read in their textbooks is usually not enough to enable them to perform well on traditional tests. They must also engage in some activity for the purpose of enabling them to remember what they understand.

2. *Activation of Prior Knowledge:* When students are learning new information, teachers should activate their prior knowledge about the subject being taught. This may be accomplished by asking students two questions. The first is, "What do you know about . . .?" The second is, "What do you want to know about . . .?" Activating prior knowledge about a topic provides students with a "hook" to hang the new information on in their mental memory network.

3. *Maintenance Rehearsal Versus Elaborative Rehearsal:* Maintenance rehearsal as the term implies consists of using some memory strategy that keeps or maintains information in short-term memory, but does little to facilitate the transfer of the information from short-term memory to long-term memory. Repeating a telephone number over and over again until it is dialed is an example of maintenance rehearsal. Elaborative rehearsal is a more active process that involves elaborating on the new incoming information in some way. Elaboration may consist of making associations between the new information and what one already knows, creating a mental image of the new information, recoding information in some way (e.g., taking notes on a chapter while reading it), or creating some mnemonic device that helps memory of the information. Elaborative rehearsal is more effective both for transferring information from short-term memory to long-term memory and for storing information in long-term memory. Many students unknowingly use maintenance rehearsal strategies as their primary strategies for learning. For example, when learning vocabulary words, they write the words on one side of index cards and the definitions of the words on the other side of the cards. They then repeat both over and over again. While the act of writing the words and their definitions on index cards is not in itself useless, study should consist of more than reading the two over and over. Students should still engage in some sort of elaborative rehearsal strategy.

4. *Multiple Sensory and Multiple Format Instruction:* Teachers have heard the term multisensory instructional methods for a number of years. The use of these continues to be important for enhancing memory and learning. In addition to multisensory teaching methods, information should also be presented in multiple formats, such as in spatial and linear formats. The computer program *Inspiration* is useful for this purpose. It enables students to create and modify concept map webs and other

graphic organizers. It also enables students to convert the concept maps they have created into traditional linear outlines. Additionally, it helps students prioritize and rearrange ideas to create essays and reports, as well as to organize information from their class notes or textbook chapters. Thus, it provides students with a number of ways to recode information, and this recoding facilitates long-term memory storage and retrieval. The program is available from Inspiration Software, Inc. at: HYPERLINK "http://www.inspiration.com" www.inspiration.com or 800-877-4292. It may be downloaded from the internet for a 30-day free trial.

5. *Proactive and Retroactive Interference:* Both of these concepts are important ones for schools and teachers to know and address, particularly with regard to the length of class periods and instructional methods. When storage or consolidation of newly learned material is disrupted by prior learning, the phenomenon is referred to as proactive interference. When subsequent learning disrupts the consolidation of information in memory, the phenomenon is called retroactive interference. During the traditional school day, students are presented with new or partially new information approximately every 45 to 60 minutes. This situation produces fertile ground for proactive and retroactive interference to disrupt the storage of knowledge in long-term memory. If proactive interference occurs, the learning of information presented in the first class will interfere with the learning of information presented in the second class. If retroactive interference occurs, the opposite situation will exist. That is, the learning of information in the second class will interfere with the learning of information in the first class.

Because of proactive and retroactive interference, block scheduling is a good alternative to traditional scheduling. With block scheduling, students have approximately four 90-minute classes each day. If teachers use the 90 minutes wisely (i.e., they do not simply lecture for 90 minutes instead of 45 minutes), they can provide students with opportunities to engage in activities that will actually enhance the consolidation of the new to-be-learned information in long-term memory. Proactive and retroactive interference also provide rationale for curricula that crosses different disciplines.

6. *Episodic and Semantic Memory Systems:* Episodic memory is the memory system that stores information about the events or episodes in our lives. Semantic memory is the memory of knowledge and concepts. Because individual differences exist in the effectiveness of both of these memory systems, teachers should use multiple, varied activities, such as projects, group work and field trips. Parents should also reinforce learning by exposing children to active learning experiences such as trips and tours.

7. *Perceptual and Conceptual Priming:* Perceptual priming refers to the phenomenon that prior perception of an object leads to easier subsequent perception of the same object. Priming occurs on a conceptual dimension as well. Thus, exposing students to concepts via advance organizers such as introducing vocabulary, objectives and/or questions prior to reading or presentation of new information can facilitate the memory and learning of this information.

8. *Classical or Associative Conditioning:* Classical conditioning consists of pairing a neutral stimulus with a stimulus that in the absence of learning

evokes some response (i.e., unconditioned response). Subsequently, the previously neutral stimulus simply by its association with the original stimulus comes to elicit a similar response called the conditioned response. Many positive and negative emotional responses to situations are learned through the process of classical conditioning. Teachers and school personnel need to be aware of this phenomenon because it can be the cause of many fears and anxieties associated with and experienced in the school setting. By the same token, teachers can take advantage of this phenomenon to enhance children's positive feelings in school.

9. *Nonassociative or Evaluative Learning:* This term refers to the influence that prior experience has on whether a stimulus is subsequently perceived as positive or negative. We tend to favor familiar stimuli over unfamiliar stimuli. This concept is important for teachers to remember when they are introducing new unfamiliar learning activities to their students. Students may have an initial knee-jerk negative reaction to these activities. In addition, this concept may be useful for understanding and overcoming discrimination against racial, ethnic, cultural or learning differences that are common in the educational environment. These differences may be less favored simply because they are less familiar.

10. *Encoding and Retrieval Practice:* Encoding practice for school students generally consists of various ways of inputting to-be-learned information. Specific strategies might include reading and re-reading textbook chapters or lecture notes (i.e., maintenance rehearsal), or more effective strategies such as outlining or mind mapping information presented in the book or during class lectures and/or using some mnemonic strategy such as the method of loci or word substitution method to encode information in long-term memory. Retrieval practice consists of engaging in activities that call for the recall or access of stored information in long-term memory. Studies have shown that in some cases retrieval practice may actually be more effective for retention of information than encoding practice. Thus, research supports the notion that activities such as reviews of previously presented information when students are asked questions in class, practice tests, studying with other students and parents who ask questions about the information to-be-learned, and constructing and completing self-tests should enhance memory and learning.

11. ***Retrieval Cues and the Encoding Specificity Hypothesis:*** A retrieval cue is a stimulus that is stored with the to-be-learned information. Retrieval cues facilitate the recall or access of the stored information. The encoding specificity hypothesis states that retrieval cues must be present when learning takes place in order to be effective in facilitating the recall of information. Retrieval cues may take various forms. They may consist of conceptual categories that the new information is placed in. They may also be visual images or other words that the new information is associated with at the time it is stored in long-term memory. Retrieval cues may consist of prior knowledge that has been activated and used as the "hook" in memory for hanging new knowledge on, or it may be experiential in nature, such as completing a project or going on a field trip. When students are provided with the retrieval cues (e.g., multiple choice tests or tests with word banks), it is easier for them to access information that has been stored in long-term memory.

12. *Mnemonic Methods:* Memorization of facts and knowledge through the use of mnemonic methods may provide the scaffolding for higher order

thinking. Mnemonic learning might be especially helpful for storage and retrieval of information in long-term memory when students lack a relevant knowledge base about the topic they are studying. When mnemonics are used during encoding or information, they may provide visual imagery or verbal elaborations that serve as cues for recalling information that is low in imagery or in meaningfulness. Students can generate their own mnemonic devices or they can be provided with mnemonic materials by their teachers.

13. *Metamemory:* Students often need help with identifying their specific individual profiles of memory strengths and weaknesses. For example, children who have problems in the school setting often have a relative weakness in auditory short-term memory and a relative strength in visual short-term memory. This knowledge will help enable them to develop and/or understand the need for strategies to deal with situations that place considerable demands on auditory short-term memory.

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Appendix

Directions: Read the items below and place a check in the box that best describes how true this statement is for you.

Memory Self-Test

1. I am able to easily remember what has been said or done in the past 24 hours.

☐Never ☐Sometimes☐Often ☐Always

2. I can easily remember information for a short period of time (e.g., a phone number).

☐Never ☐Sometimes☐Often ☐Always

3. I am able to easily hold information in my head while working with it (e.g., perform mental arithmetic, take notes while listening to a lecture).

☐Never ☐Sometimes☐Often ☐Always

4. I can easily recall information that I learned in school.

☐Never ☐Sometimes☐Often ☐Always

5. When I read, I remember the important facts.

☐Never ☐Sometimes☐Often ☐Always

6. I am easily able to recall events, things I have done or places I have been, in detail.

☐Never ☐Sometimes☐Often ☐Always

7. I can easily recognize someone's face that I have seen before.

☐Never ☐Sometimes☐Often ☐Always

8. It is easy for me to remember movies I have seen.

☐Never ☐Sometimes☐Often ☐Always

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9. I use specific memory strategies, such as saying things over and over or making mental pictures.

☐Never ☐Sometimes ☐Often ☐Always

10. It is easy for me to remember where I put things.

☐Never ☐Sometimes ☐Often ☐Always

CHAPTER FIFTEEN

The Juvenile Offender: An Opportunity to Change a Life

JUDGE DAVID ADMIRE
Northeast District Court
Redmond, Washington

I appreciate having the opportunity to come speak with you today. I believe this conference is a most helpful tool as we continue our children's journey into the future. I firmly believe that our work today is the foundation for this country's accomplishments tomorrow. We all have the ability to do great things, to reach many people and to set an example for those who follow.

This conference is about changing people's lives. Some kids need only the opportunity, some need a gentle shove, some need help in seeing the right path and others need to be carried for a while. This is our job, to be available with the knowledge, resources and love that each child needs to be successful. This is our challenge today. By being here today, you have accepted that challenge. It is impossible for all of us to have all of the knowledge, experience or understanding of the tools or ideas that exist today. Hopefully, as we share information during this conference, each of us will grow and become better prepared to do our jobs in the coming days and months.

The title of my presentation is "The Juvenile Offender: An Opportunity to Change a Life." Some of you may believe that this is a contradiction in terms. Too often, people in this country believe that only punishment should occur in the criminal justice system. To hold such a belief requires one's willingness to pay more and greater taxes. To have punishment as the sole purpose of our criminal justice system requires that we hire more police officers, elect more judges, hire additional prosecutor's and public defenders, build new courthouses and construct new prisons and detention facilities. I suspect that those who call for more and greater punishment of criminal defendants are the same ones who are demanding lower taxes. However, you cannot have one without the other.

The cost to incarcerate a juvenile in the state of Washington is in excess of $56,000 per year. That figure is so high because we have a requirement not only to hold, but also to educate those young people. If we are only going to punish our juvenile offenders, the cost does not end there, for every child becomes an adult. There is no reason for us to believe that an incarcerated child residing in a punishment system should become anything other than an incarcerated adult. In the State of Washington, to incarcerate an adult in the state prison costs nearly $25,000 per year. I suggest that mere incarceration is not cost-effective. There are other avenues that we may travel in reaching everyone's goal — that each person lives peaceably among his neighbors.

Since most of you work with children, I expect that you would agree with most of my comments so far. However, each of you works within a system or bureaucracy that is affected or pressured by those who hold different views. Therefore, our job becomes twofold. First, we must try to convince those who want to place offenders in jail and throw away the key that those views are contrary to their own interests. Rather than talking about the child, his or her potential, or the environment surrounding them, concentrate on the economics of punishment. I believe that only when those individuals who hold such beliefs realize that the costs will simply become unacceptable will they look to other means of solving this problem. While we all try in our own way to assist those young people who are in need, we each face an inherent systemic failure. Our second job is to understand this failure and corrected it.

SYSTEMS I — The Family

It goes without saying that the family structure has changed remarkably in the last forty or fifty years. The number of single parent homes has increased dramatically. I would illustrate the difference in the following manner. The first shows the children in a protective web. The second shows the children without that web.

| Father |
| child |
| child |
| Mother |

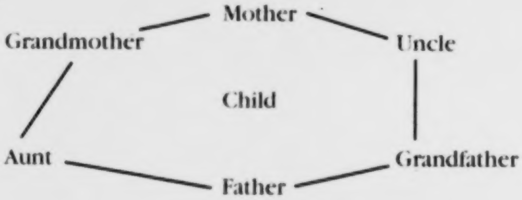
child — Mother — child

Too many young men have no role models in their lives. Because of this, there is a gaping hole in their developmental process. Likewise, young women also have incorrect views of appropriate male behavior. Because of this, inappropriate perceptions and behavior are passed from one generation to the next.

A young man without a father at home looks for that male leadership in other places. Perhaps that is a gang leader, a drug dealer or, if we are lucky, a teacher. Without someone to look up to and to have a chance to emulate their appropriate male qualities, these young men will not even know what to search for. But search they will. What they find is what we are left with.

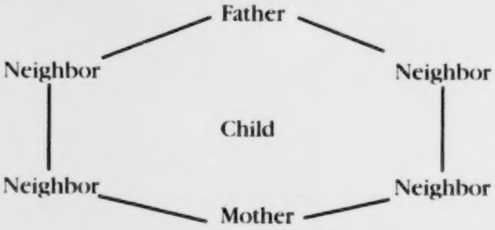
The young woman without the appropriate male in her life will not know what good qualities are or should be in a man. She may have coming through her life a series of her mother's boyfriends. This might meet the needs of her mother at the time, but it leaves her empty. She may follow the footsteps of her mother. This downward spiral continues from generation to generation.

We have become a country of ever increasing mobility. No longer are we born or raised in one city, nor do we continue to live in the same city. The roads are good, means of travel inexpensive and the potential for better jobs is too luring to keep us at home. Because of that, the extended family has become a thing of the past. Now when Johnny does something wrong, his grandfather is 400 miles away. Uncle Joe has left to seek his fortune elsewhere. No one remains to lead Johnny down the right path. When I was growing up, these adults were in my life. I knew that they would support my parents should I stray down the wrong path. My cousins would be treated the same by my parents. We instinctively knew that there existed a family circle which bounded us with love and discipline. This is illustrated by the following:



Only the most rebellious would try to break free. For the rest of us, we took comfort in its existence.

It didn't stop with the extended family. Because I lived in the same neighborhood for most of my formative years, the neighbors became an extended family also. My mother would have coffee with the neighbors. During their conversations, my transgressions would be discussed. Later that day, as I walked down the street, my neighbors would point out my transgressions to me. They would let me know in no uncertain terms that my behavior was unacceptable and that I would be held accountable. Clearly, for a young man, that seemed entirely unfair. It was one thing to fight with your parents, but to take on all the adults in the neighborhood was impossible. While I did not realize it at the time, these people also held me in a circle of love and discipline.



I can remember being warned by certain neighbors that they would turn me over their knee and spank me. I knew that they would carry out that threat. I also knew that my parents would approve of their actions. My friends knew that my parents would do the same to them and that their parents would also approve it. It never occurred to my parents, their friends, my friends or me that this was in any way inappropriate. Because of that, we walked the straight and narrow.

In today's world, we are lucky if we even know our neighbors. In this time, spanking of one child by a neighbor would probably lead to a lawsuit. While this is understandable, I now look back with fond memories of how safe I felt in our neighborhood with all of those neighbors looking out for me.

We have lost these vital ingredients of family and neighborhood. What steps can we take to replace them? First, we must try to keep the nuclear family intact. Second, we must provide appropriate role models for young people. It is not difficult to train volunteer mentors to step into that role. Third, we must understand that it truly takes a village to raise a child. Fourth, we must provide single parents with the training and support necessary to assure that they can be successful with their child.

SYSTEM II — The Schools

Another system that has, in certain respects, failed is our education system. When I speak of having failed, I mean that certain individuals' needs are not being met. Part of the reason for this is that our system is designed to educate the majority of young people as a group rather than everyone as individuals. While this may be necessary, it does not take into account our individual differences that require something other than group education.

Furthermore, it is obvious that our system of education is under funded. The education of each new generation should be the number one priority of this country. If you examine teacher salaries, one realizes that education cannot be our number one priority. Until we as a nation decide to pay teachers a reasonable salary, our nation will suffer because our children are not being treated as the incredible assets they are.

Our school system has three parts that appear at times to be moving in different directions. First, we are all aware of the constant demand to reduce taxes. The taxpayers are demanding accountability from all government agencies in how they spend their funds. The old way of doing business is coming to an end. We must find new and creative means of educating our young people with the funds that are available. This requires all of us not to be tied to the past, but to reach into the future unhindered by old thinking. Once the individual taxpayer believes that government funds are being spent wisely and without waste, school funding may rise to meet the needs of the future.

Second, school administrators must hear the concerns of teachers, for those on the front lines of this battle know best what truly is needed. This bureaucracy must not be afraid to change and adjust with the times. An emphasis must be placed on what can be done rather than on what cannot be done. I have observed new leadership of a school system breathing fresh air into the district, invigorating and energizing every employee. I cite the example of John Stanford in the Seattle school district. He was a retired army general with no experience in the field of education. He died recently of leukemia. He left behind the most incredible transformation in the school system and an entire city saddened by his death. He is a success story for education, which I recommend to all of you.

Third, teachers must not fear new and exciting innovations in their workplace. While distrust of school administrators may exist, there must be a willingness to move into uncharted territory. Change is not easy for any of us. However, the future has more to offer than merely being tied to the past. I have seen incredible teachers who understand the needs of the individual. I am amazed what they can accomplish. I have also heard too many teachers say that it is unfair to the class to work with only one individual. However, fairness is not a question of treating everyone the same. Fairness is giving everyone what he or she needs.

Our school systems can look at the future as a difficult problem. I suggest we view it is an interesting challenge and important opportunity. For then, together, we can accomplish great things.

SYSTEM III — Substance Abuse and Mental Health

It has been my experience on the whole that substance abuse and mental health providers have been doing an impressive job with very real and difficult problems. The toll that substance abuse and alcoholism take on our young people is enormous. These young people, who come from good families, do not understand the danger upon which they embark as they begin their use of illegal substances. Soon, those young men or women become shadows of their former selves, unrecognized by their parents and lost to their friends.

Because it has become so commonplace, the stigma of alcoholism and substance abuse has waned somewhat in recent years. This allows us to treat individuals for these diseases rather than denying their occurrence. It certainly is not unusual for children to talk about their friends being in rehab. Parents are more concerned about confronting their child's addiction rather than being embarrassed by that addiction. There is hope for these children in the various treatment facilities around our country.

The mental health of our children is also cause for great concern. It seems that daily we read about a new shooting in a junior high school or other educational facility. What is happening to our children? Some are suffering from serious mental illnesses. These illnesses create difficulty in their lives at home, in school or just with their friends. My guess is the causes of these illnesses are many and varied. They affect not only the lives of the child, but his family and all those with whom he comes in contact. We can only hope that the mental health facilities designed for young people can help them live normal lives.

SYSTEM IV – Courts

The court system, as hard as it has tried, has also failed our young people. First, the sheer number of individuals coming through the system is overwhelming. The large number of violent young offenders is new to the system. The resulting high case loads for juvenile probation officers makes it difficult at best for them to assist these young individuals. Likewise, large number of cases coming before each judge makes personal attention to the individual nearly impossible.

The level of understanding about learning disabilities and attention deficit disorder by judges, probation offers and attorneys is minimal. Too often, judges perceive an individual who fails to follow their orders as someone with an attitude rather than someone with a processing problem. That same individual who does not appear in court on time may be seen as someone who does not care, rather than as simply being disorganized because of his attention deficit disorder. Until we educate those within the criminal justice system about these issues, we should not expect any great change in the individuals who suffer from learning disabilities and attention deficit disorder. We should expect history to repeat itself over and over again because we have not learned from our mistakes.

SYSTEMS FAILURE

Each of the systems I've previously discussed has within it certain causal factors that result in failure of the system from operating to its maximum potential. There also exist a failure among systems. In a perfect world, each system would operate correctly in and of itself and with the other systems it interacts with. Since this isn't a perfect world, these failures do and will continue to exist until such time as we approach them in a different manner. Now I would like to briefly discuss the problems that each individual system has in working with other systems.

Most families operate with a lack of knowledge concerning the difficulties their child is having. This lack of information and understanding only compounds the problem when they face working with their education system, treatment system, and criminal justice system. Furthermore, it is the rare individual who can stand in the face of seemingly hostile bureaucracies and advocate appropriately for their children. In the legal system, we recognize that as a lack of bargaining power.

When the family confronts school administrators about the problems their child is encountering, they do not possess the technical knowledge to overcome the arguments of school officials. When those school officials are wrong, the children are harmed. The opposite is also true. When the school officials are correct, it is difficult for them to proceed appropriately in the face of parent who lack the knowledge of the issues concerning their child.

Most parents have little or no knowledge of substance abuse or alcoholism. The mere fact that their child is caught within this web is very frightening to them. There is an immense learning curve before them as they struggle to find out not only what is best for the child, but also what is appropriate for them. They want to believe their child even in the face of so many lies that they have been told. The fear they feel for the future of a child makes it difficult for them to take recommended action that is contrary to their instincts. The love they have for the child makes it difficult for them to be tough instead of compassionate. However, when the parent perceives their child correctly, the treatment agency may not. They are in most cases not able to correct the agency's misperception. The issues surrounding alcoholism, drug addiction, denial and enabling activity are difficult to overcome.

In dealing with the court system, the families are at a distinct disadvantage. This is a foreign system to most people. The participants speak a different language that may not be understood by those outside of the system. Too often, the participants are callused to the crimes, victims and offenders that they deal with. It is a rare occurrence for a parent to challenge me as a judge. Without the benefit of an attorney, they are not, for the most part, prepared to do that. The parents quickly realize that when a child enters the criminal justice system, the judge, probation officer or prosecuting attorney holds power over their child. If those individuals are too callused, too tired or too unaware, their child may suffer, and they know they can do nothing about it.

Teachers and other school officials have difficulty dealing with other systems for many reasons. First, the demand on their time to teach all of the children is enormous. There seems to be little time left over to reach out to the people in other systems. Second, most school officials do not perceive their job as interacting with other systems. When a child has committed a crime, that is not their problem. When a child suffers from alcoholism or drug addiction, that, in and of itself, is not their problem. It only becomes their problem when it affects the school. The mental health of the child, which may affect his schoolwork, is best left to others who are trained to deal with it. Third, there is a real reluctance on the behalf of our body politic to have our schools become involved in any of these issues. The controversy surrounding sex education in our schools, including what books are appropriate, are symptoms of some people not wanting our schools to become involved in anything more than pure education.

Too often our schools believe that they are already overburdened by requirements.To avoid further entanglements is very attractive to them. But, as we will see, this avoidance of additional work may actually cause more and greater difficulties.

Many treatment facilities are hamstrung by the requirement of confidentiality. While I understand the need to protect the privacy of individuals in treatment, I also believe that this requirement can be detrimental to a child with other needs. How can a school appropriately accommodate a child without such knowledge? How can a judge forge an appropriate sentence when he does not have such important information? If a treatment facility cannot communicate freely with the judge or probation officer, they cannot avail themselves of the power of that system to assist in treatment. If a young person is involved in a criminal case, a judge can use his authority to incarcerate this young person as an incentive to enter into and complete treatment. It has been my observation that not all treatment is successful. However, it has also been my observation that requiring treatment can and usually will at some point be successful. The important point is getting the individuals into treatment and keeping them there.

Too many treatment agencies have little or no understanding of learning disabilities and attention deficit disorder. Therefore, they continue treating those suffering individuals like everyone else. That will assure that their treatment will fail. Until the schools and treatment agencies can share this type of information, we should not expect these young people to enter into recovery from alcoholism or drug addiction. They will continue to drink and drug as a result of our failure to communicate.

One of the difficulties in the criminal justice system that a judge confronts every day is having up-to-date information. For example, when a defendant is required to meet certain conditions during his probation period, either his probation officer or I must monitor his compliance. If the offender falls out of compliance with his drug treatment, the probation officer will notify me and request that a hearing be set. I will order the hearing, but it will not take place for two to four weeks. During that period of time, the offender will try to get back into compliance. More likely than not, at his hearing he will tell me that he is in compliance. I may or may not at that time have the ability to confirm what he says. This may delay the proceedings further. This results in our system's failure to hold the offender accountable.

The criminal justice system rarely works in concert with the education system. Yet, once again, the coercion available in the criminal justice system could be put to good use within the education system. However, if we base certain conditions of the sentence on attaining certain educational accomplishments, it is difficult for us to enforce those conditions if the school systems have not appropriately diagnosed learning disabilities or attention deficit disorder and made appropriate accommodations. This lack of system coordination and communication certainly hurts the child.

CHAPTER FIFTEEN

A New Direction

With these observations as a background, I'm going to propose that we adopt a new and different method that focuses on the child rather than on individual systems. While I believe that each system more or less focuses on the child, our system of systems does not. Put another way, the lack of communication and coordination among the various systems that work with an individual child fails to maximize their effort for the child. I suggest to you that until we change our current methods of operation, we will continue to have an unacceptable level of failures with individual children. This is not a question of blame, nor do I intend to point a finger at any one system or group of individuals. This appears to me to be the natural process that occurs. Although people within each system do their very best, the institutional barriers that are in place prohibit us from reaching that goal. While we can try within each of our systems to make it more responsive and workable, we are still confronted with the institutional failure of our system of systems.

Therefore, let us explore some new possibilities. In doing so, we must remove the blinders that have narrowly focused us within our own jobs. We must explore not what is, but what may be. We must explore not our limitations, but our possibilities. We must challenge our reluctance with our willingness to move forward. If we are not willing to look at old questions with a new perspective, we will be locked in the past. Everyone here has so much to offer. If we can only unlock that creativity and energy and direct it in a coordinated manner, our children would blossom as never before.

How can we begin such a quest? Shortly, I'm going to describe to you a model of inter-system cooperation and coordination that works. But before we can embark on adopting that model, certain things must occur. First, all of the systems that I have discussed and any that I've left out must make a commitment from the top-down to this model. There must be a buy-in at all levels of each system. That means that minds are going to have to change and some horizons will have to be broadened. For this to be accomplished, each person at each level must see the value of this proposal in his own job. They must understand not only how it will generally help them, but how it will explicitly help them. That is a tall order.

If you can understand the limitations of our current system and the benefits of this proposal, you can be the lightning rod for change within your system. To make such a change requires more than a commitment to any model. It requires a commitment to children. Because you're here today, I believe that you have that commitment. So let us begin.

There must be initially some level of cross training among each system. By that, I mean we must generally understand the role of that system, how it operates, the problems it encounters, the solutions it has undertaken and how it integrates with our system. This is simply a question of education. Most of the systems I've discussed today have continuing education requirements.

For example, the criminal justice system has very little contact with the education system. I would guess that the knowledge of the education system by judges and probation officers comes from their experiences with their own children. Likewise, those in education have little contact with the criminal justice system. Most teachers may have a general understanding of the court system, but I suspect they have little, if any, practical knowledge as to the workings of that system. Because of that, they are unaware that children coming through the criminal justice system can be assisted in meeting their educational requirements. This one example, while illustrative, does not begin to show the lack of knowledge that we have of each other's jobs, problems and the bureaucracy itself. How can we expect to coordinate our efforts without understanding each other?

To obtain this knowledge through education requires the support of the top echelon of each system. Therefore, it is critical that we convince those that control the funding of educational programs of the need for this type of education. I know that as a judge I can request that certain educational programs be included in our state judicial conferences. I expect this opportunity exists within every other system I have discussed today.

The model program I'm going to discuss is a coordinated systems approach to an individual. This program currently operates in an ad hoc manner for school-age children in my city now. I will discuss that in more detail shortly. I am presently implementing this program in a more formalized manner in my court. It is called the Northeast Intensive Coordination Project. I would like to provide you with some history as to why this project was initiated. I personally found it very frustrating to work with an individual defendant whose needs were being addressed by more than one group or agency. When an individual came before me, I often had conflicting information as to his progress or lack of progress. I would receive different reports from different agencies involved with this individual. Some would indicate he was in compliance with conditions of the sentence, while others would indicate that he was not. It also became apparent that some defendants would exploit this lack of coordination to their own benefit. Because of this conflicting information, there existed a very real possibility that I could jail someone who did not deserve it or take no action on someone who should be ordered to jail.

Therefore, I initiated discussions with our probation department and others to see what steps could be taken to alleviate this situation. I had extensive discussions with Mr. Ron Hume, Executive Director of LDA of Washington, about his prior experience with a similar project in Chicago. In that project, he had acted as a facilitator for those dealing with sex offenders. During our discussions, I became convinced that we should initiate a similar program within my court. Mr. Bill Cobb, Director of the King County District Court probation department, was brought into these discussions to determine the feasibility of our proposed action. His approval and commitment to this program was critical. He then brought in Mr. Greg Anderson, the Director of the probation department for my court, to discuss operational details.

We then brought in the Director of the Eastside Recovery Center and the Director of the Eastside Mental Health Center to determine whether their agencies would be willing to participate in this project. Each of them concurred and a time schedule was established for implementation of this project. This program has been designed as a pilot project. To determine its ability to operate smoothly, limited numbers of defendants will be involved initially.

CHAPTER FIFTEEN

Northeast Intensive Coordination Project (NICP)

NICP — The Beginning

The probation department will select five to eight individuals with court ordered requirements to complete either alcohol or drug treatment at the Eastside Recovery Center or to complete domestic violence treatment at the Eastside Mental Health Center. These individuals will be assigned to one probation officer who will be involved in this program. Those individuals in either alcohol, drug or domestic violence treatment will be assigned one counselor within their respective agency. It will be determined whether any individual has additional requirements imposed on him, such as completion of our mentor program or life skills program. If so, the appropriate individual for those programs will also be involved in this project.

NICP — How It Operates

Mr. Hume will initially act as the facilitator because of his experience in this role in Chicago. Because of his other commitments, he is unable to do this on a full-time basis. Therefore, he will train a volunteer to assume this position. The facilitator will schedule the first meeting with all the participants. The facilitator will schedule a block of time, four to five hours, for the project's work. Each defendant will then have blocked out from thirty to sixty minutes for his case to be discussed. The facilitator will schedule the defendants in such a way as to assure that participants have all their cases heard in order rather than having to wait while other cases are discussed. Because everyone has full schedules, it is important that time is not wasted.

At the appointed time, the participants will come together with the facilitator controlling the meeting. During the meeting, each participant will review his agency's contact with the individual defendant. The appropriate releases will have been obtained from the defendant prior to this meeting. There are several goals for this meeting. First, to determine whether the defendant is in compliance with all court imposed conditions. Second, if the defendant is not in compliance, to decide what remedial action can be taken. Third, to ascertain whether the defendant is telling each participant the same story. Fourth, what assistance can each participant give to the other to assure that the defendant can remain in compliance? For example, can the probation officer adjust his meeting times with the defendant to assure that there is no conflict with the treating agency? Perhaps one treatment modality used by one agency is more successful with this individual than a different modality use by a separate agency. Fifth, to discuss what other options are available that may be useful to the defendant. For example, the participants may discover that the defendant may suffer from certain learning disabilities. Therefore, it may be helpful for him to attend the life skills program. Furthermore, it would certainly be helpful if appropriate accommodations were made for the defendant where necessary. Sixth, it also helps for the participants to vent their frustrations in dealing with these individuals. Those who are there particularly understand those frustrations since they, too, work with this same individual.

During these conferences, a discussion will occur about the defendant. Each participant will be able to describe the work they are involved with and the progress or lack of progress the defendant is making. They will share with each other his successes and failures. They will explore the reasons for his successes and the causes of his failures. Each participant will be able to use this information to improve his work with this individual.

NICP — Benefits

Without question, the ability to share information will be of great help to all the participants. The opportunity to have accurate information can mean the difference between success and failure. I marvel at how many times I have escaped controversy because I had up-to-date information. For example, I have had defendants lie to me about their previous convictions. Because I have had their criminal history before me, I have been able to call them on their lie. Rather than releasing that individual with a lenient sentence, I've been able to be harsher when necessary. However, I have seen other judges without this information ridiculed in the press for lenient sentences brought about by inaccurate criminal history. I am sure you have received criticism or know one who has because of decisions they made from having inaccurate or incomplete data.

This program will allow all participants who handle a criminal defendant to potentially have all the facts known to the other participants. Those individuals who have been operating partially in the dark will come into the light. For example, it would be like a teacher having problems with a child who does not follow instructions properly to learn that that child has a hearing problem. Once that is known, appropriate remedial action can be taken. Without that information, the child not only continues to suffer, but also is blamed for matters that he cannot control.

This project will save you time. At first glance, it appears that you are spending extra time in another meeting. However, it has been our experience that there is a large time saving factor because certain actions you now take are eliminated. For example, the probation officer, in trying to verify compliance with a drug treatment program, may have to make several telephone calls to the treatment agency before he connects with a treatment counselor. In the same way, the treatment counselor, in returning the probation officer's telephone calls, is wasting his time also. Remember, it is not merely making the telephone call, trying to reach an individual and finding that they are unavailable which is involved. There is the constant disruption of your day and your work as you try to make connection with this other person. Furthermore, the amount of time you spend trying to obtain information, determine what information is correct or find other resources can be enormous.

Finally, this program simply helps you to do your job better. You are able to assist your client, be that a student, a patient or a defendant, in a much more professional and complete manner. If you have a particularly disruptive student, to find a program that will help the ADD student to develop better coping skills will be of great assistance to you. If I as a judge learn that a mentor is available to assist a particular young person, I would be able to point him in the right direction. If a drug treatment center is told by the student's teacher that he has trouble processing information, the agency will be able to make an accommodation which will allow successful recovery to occur.

NICP — Problems

As you try to implement this program, certain problems will become obvious to you. These can be broken down into three categories: 1) individual barriers, 2) institutional barriers and 3) operational impediments.

The individual barriers that will present themselves come from simple resistance to change. Some people will simply deny that there exists any problem of coordination. Now, there may be certain rare instances where this is true. I believe, however, this is simply a negative reaction to change. It is much easier to continue doing that which is comfortable than to take on new challenges.

Some people may be too tired, too callused or too empty of hope to move in a new direction. Life takes a toll on every one of us as we continue our journey. It seems that those who are younger have the vim and vigor to take on new challenges - to push the envelope of change. But energy and excitement of youth does not bring with it the wisdom that only comes with experience. Wisdom comes with age tempered by experience. To have the energy of youth without the wisdom of age or vise versa leaves us incomplete to achieve our maximum potential.

The young person has to reach out to the more experienced person with the request to help make this world better for all of us. Likewise, we old veterans need to grab the young people and demand their talents as we march into the future. We who are experienced can keep our youthful counterparts from making our mistakes. And they can help us not to give up the dream of changing our world for the better.

For those who say they do not have the time, I say make the time to make a difference. For those who say they are overburdened, I say you will accomplish more and your burdens will ease. For those who say their superiors do not agree, I say convince them with your passion and intellect and the demand that we can do better. For those who say you are wasting your time, I say that a child's life is too important not to try.

Individual barriers will be couched in phrases such as "I can't", "you don't understand", "it is impossible", or "no one really cares". These are mental excuses for not trying, not risking or not caring. If you are too old, too tired or simply don't care, I suggest you move out of the way for those of us who do care and are willing to expend the energy, use our talents and grasp the opportunity to take our country forward.

The institutional barriers you may need to overcome may be more insidious than those of the individual. Any bureaucracy is inherently resistant to change because it threatens the status quo.The status quo is safe, comfortable and with little risk. That is a huge mindset to overcome. It can and has happened. Some of our brightest people today are in software development. They understand that doing nothing invites failure because others will pass you by. That industry has prospered because it values those who search for the undiscovered, are not intimidated by challenges and will not be satisfied by what is, but is excited about what may be. If we all had that view of our jobs, imagine what we could accomplish.

A bureaucracy must come to understand that progress comes from trying and failing, rather than failing to try. That is how every child grows and learns. As we get older and bureaucratized, we fear failure more than we value achievement. Too few public officials are willing to stand up and say we made a mistake because we are trying to get better. It is easier to say I have made no mistakes even though we are falling behind. Failing to try keeps us tied to the same old mistakes and assures that no progress will be made.

Because a bureaucracy is made up of many individuals, sometimes it is impossible to determine who is actually placing the roadblocks in your way. The only way to insure your progress is to convince the person at the top of the value of your ideas by showing them how you can help them do a better job. If you can do that, those obstructionists below will fall into line. While they may not want to risk the changes you suggest, they certainly do not want to risk the ire of the boss whom you have convinced.

The operational impediments are the easiest to overcome. This is simply a matter of opening your mind to what is possible, rather than what cannot be done. Maybe it means looking at an old problem in a new way that gives you the answer. It may simply require talking it out. These are the types of problems we solve every day. While it might not be easy, it is not as difficult as changing an individual's or group of individuals' mindsets.

The barriers you face in trying this program may be large. I look at it as a challenge. To examine a problem, to explore and search for new answers and to implement a solution that affects people's lives can be most satisfying for you both personally and professionally. I have felt the excitement of that journey and recommend it to you.

NICP — School Age

We have in our area an informal program similar to NICP for young people. This is a coordinated approach for young people that involves certain agencies. We have a group called Smart Turn for these young people. It has grown up as collaboration between the police department and a group that assists young people with mentors. There is some coordination with the junior high schools, but not as much as would be helpful. In this program, the police department refers kids to Smart Turn to help keep them out of trouble. On a case-by-case basis, Smart Turn may contact other agencies either to request assistance or to offer assistance on behalf of certain young people.

This program has been successful in helping a large number of teenagers get through these troubling years. It is not a formal program, but rather done on an ad hoc basis as the need is determined. I have contacted school officials and other agency heads to determine if they would be interested in formalizing this effort. Having discussed the need to work together, everyone has expressed an interest in moving forward on that project. Because I deal mostly with adults, the initiation of that project is on hold pending the development of NICP. As we work out the kinks in that, we can apply the solutions to the program for teenagers.

Summary

During this presentation, I have first tried to examine a problem that I find very frustrating. Before one can search for a solution, one must understand the problem. This can be the most difficult part of the process when you are examining systems. It is too easy for us to get wrapped up in individual problems or processes. However, change is more effective when done system wide. Not only does it affect more people, but also the solution becomes institutionalized. Therefore, it is very beneficial to sit back and take a wider view of our world. If you are able to do that, you will find new answers that didn't even seem to exist before. Each of us is very aware of the problems we encounter within our individual system. Those problems can seem daunting themselves. Perhaps you have not thought of solving those problems by looking outside of your own system. I failed to look beyond the criminal justice system far too long.

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Having examined the issue of coordination among systems, I have suggested to you a practical solution that I believe can and will be effective. I have explored the benefits and problems you will encounter in implementing this project or something similar. I have discussed with you the type of agencies or groups that should be involved in such a project. I am sure that you will think of others that will be necessary to include.

What I have not discussed is what is most important. That is you. I see very many bright people whose intellectual abilities can achieve much. I see a passion for children that can bring them hope - something they may never have had before. I see a group of people with the creativity to see things that I cannot. I see men and women with the determination to succeed where others would fail. Robert Kennedy said, "Some men see things as they are and wonder why. I dream things that never were and say why not." I hope you, too, are a dreamer. For we who dream lead the way for others to follow.

The children we touch today will be our dreamers of tomorrow. I am excited at what they can accomplish. I am excited at what you can accomplish for them. On their behalf, for all that you have done and all that you will do as you leave here today, I thank you very much.

CHAPTER SIXTEEN

Dyslexia — What Is It, Really? Personal Reflections and Scientific Fact

G. EMERSON DICKMAN, III, J.D.
Attorney at Law
Maywood, New Jersey

I'm not an advocate for children in special education because I'm dyslexic. That is the answer to the first question that people have when we first meet. They have been told I am dyslexic, and they find out I'm an advocate. Rather, my early interest involved persons with developmental disabilities. However, within the broad spectrum of reasons why some children learn differently, it is presently the field of learning disabilities that is the most dynamic, creative, and motivating.

Within the field of learning disabilities most of the effort of researchers and educators seems to be focused on issues related to the acquisition of literacy skills. How are literacy skills acquired? Why do some children have difficulty acquiring such skills? What can be done to help those who don't easily acquire such skills? I guess I became interested in learning disabilities generally, and dyslexia specifically, because these are the same questions for which I needed answers in order to advocate successfully for a child who couldn't seem to learn how to read. What I didn't know is that the dedication, generosity, and selfless nature of those in the forefront of finding answers to these questions are as irresistible as quicksand. This is where everything is happening. I've been sucked in over my head, and I love it!

For many years I declined to speak of my own dyslexia. Although I don't recall ever being ashamed or being in denial, I never thought my having dyslexia was a credential that should be exploited as if it made me a better advocate or that my anecdotes would provide the least bit of meaningful knowledge or insight to anyone else. How many presentations have we all suffered that were merely entertaining and didn't bring us closer to the answers we were seeking? I didn't feel that what I have to say about myself would be helpful to anyone else. Nevertheless, at some point I was convinced to take a shot. For my story to be relevant, the reader (or listener) must be able to distinguish his/her needs as a learner from my own in order to profit from my experiences. We are not the same; we are different people with certain similarities. Knowing what makes us different is as important and meaningful as knowing what makes us the same.

Four out of ten children have difficulty learning how to read. Almost half that number has so much difficulty that they need direct and explicit instruction by knowledgeable instructors using informed methods of instructions if they are ever to be efficient at breaking the code.

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There was a time when reading was not necessary to be a successful provider. Two hundred years ago, if you could track an elk, shoot straight, and figure out how to get it back to camp you were a hero and community leader - reading didn't matter.

In this day and age, literacy skills are required if we are to effectively provide for our family, our community, and ourselves. The Internet has recently made keyboarding skills a necessity for everyone wanting access to the "information highway." It wasn't too long ago when only secretaries needed to know how to type. The time may come again when reading will not be a required skill; but for the foreseeable future, "reading is the foundation upon which all scholastic success depends." R.E. v. Jersey City Bd. of Ed. OAL DKT NO. EDS 7018-97 (N.J. 10-30-97).

What is a Learning Disability?

Surprisingly, there remains significant disagreement among laymen regarding the concept of "learning disability." In order for what I have to say to be meaningful to you, we must have a common understanding of what I mean when I use the term "learning disability."

Sally Shaywitz, M.D., has referred to a learning disability as "a weakness in a sea of strengths." In essence, each of us is expected to have skills and abilities that fall within a predictable range above and below our average potential, i.e., a normal distribution of skills and abilities. This range, slightly above and slightly below average, is the "sea of strengths." When one or more skills or abilities fall unexpectedly below this range, the resulting profile defines the specific learning disability involved. It is the unexpectedness of the deficit that distinguishes a child with a learning disability from children with more global or pervasive developmental delays whose specific skills are not unexpectedly deficient.

Research conducted by the National Institute of Child Health and Human Development (NICHD) at the National Institute of Health (NIH) indicates that 17 to 20 percent of children exhibit a significant reading disability. Of children that are reading disabled in the third grade, 74 percent remain disabled at the end of high school. The pervasive effect of deficient literacy is aptly described by Keith Stanovich's "Matthew Effect" construct.

Matthew Effect

Stanovich has coined the phrase "Matthew Effect" to describe the phenomenon that a single unmediated deficit can have a significant impact on the development of skills that are not deficient. The phrase comes from the Gospel according to Matthew where it is inferred that "the rich get richer and the poor get poorer."

In addition, there have been a number of empirical studies of the correlation between IQ and reading achievement. The results of these studies converge on the conclusion that IQ is only weakly and nonspecifically related to achievement in the early grades. To these findings, however, I must add a sobering afterward. Whereas IQ and general cognitive skills seem not to have much bearing on early reading achievement, early reading failures seem to result in a progressive diminution in IQ scores and general cognitive skills. In the words of Keith Stanovich, who has developed this argument with scholarship and force:

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"Slow reading acquisition has cognitive, behavioral, and motivational consequences that slow the development of other cognitive skills and inhibit performance on many academic tasks. In short, as reading develops, other cognitive processes linked to it track the level of reading skill. Knowledge bases that are in reciprocal relationships with reading are also inhibited from further development. The longer this developmental sequence is allowed to continue, the more generalized the deficits will become, seeping into more and more areas of cognition and behavior. Or to put it more simply — and sadly — in the words of a tearful nine-year-old, already falling frustratingly behind his peers in reading progress, 'Reading affects everything you do!'" (Adams, 1990, pp. 59-60).

Cognitive Dissonance

The concept of unexpectedness helps explain an unfortunate and often experienced side effect of having a learning disability. Concomitant to unexpected weakness are unreasonable expectations and concomitant to unreasonable expectations is failure. Failure is a relative concept. Expecting an "A" and getting a "B" is as much a failure as expecting a "C" and getting a "D". The messages we hear from our environment are, "If you would only try harder you could do it." "You don't care enough." "You are lazy." "You are unmotivated."

As we enter into adolescence the belief that we can do "it," is being challenged by an emerging understanding that we can't do "it." These incompatible beliefs eventually create an uncomfortable - downright painful - psychological state known as a cognitive dissonance. In order to resolve the dissonance between a belief in one's competence and efficacy ("I'm smart") with emerging beliefs of lack of competence and efficacy ("I'm stupid"), the adolescent will often add a variable to explain the failure without challenging self image. The variable most often introduced is effort. "If I don't do my homework, if I don't study for tests, if I don't go to school, my failure is explained and I can remain smart." Barry Lorinstein, a well-known neuropsychologist, refers to such a child as preferring to be seen as unwilling rather than unable.

For those of us who have difficulty learning how to read, then, we struggle with the compounding impact of Matthew Effect, failure, and cognitive dissonance.

Aptitude-Achievement Discrepancy

In order to qualify for special education services, Federal Regulations require that the pupil exhibit "a severe discrepancy between achievement and intellectual ability." Thus, the criteria for eligibility are not the existence of a learning disability (a weakness in a sea of strengths) but a failure to achieve. In other words, a pupil with dyslexia can't get special education assistance until and unless other children of similar intellectual potential are reading significantly better. This formula has been roundly criticized:

- The formula for identifying children with learning disabilities under the Federal law (IDEA) is a "wait and fail model." "The way we define kids as learning disabled is invalid and immoral," states Tom Hehir, Director, Office of Special Education Programs (OSEP), and U.S. Department of Education. (The agency responsible for implementing, interpreting and enforcing the Federal Regulations).

- Any such formula requires that the student cross a "threshold of severe failure," states Nancy Mather, University of Arizona, co-author of the materials accompanying the Woodcock Johnson Psychoeducational Battery Revised.
- "The only thing such a formula prevents is prevention," states Jack Fletcher, University of Texas, a pre-eminent researcher and author in the field of learning disabilities.
- This formula virtually guarantees failure, the Matthew Effect and a struggle with cognitive dissonance. Administrative convenience is not a sufficient reason to continue the use of this invalid and archaic construct. If you wait until a cancer patient actually shows signs of illness, it is often to late. Early detection and early treatment are the goals of the medical doctor; they must also be the goals of the moral educator.

My Story

I am dyslexic. I was held back in the first grade because I couldn't learn to read. The first day of my second try at first grade was a perfect example of the kind of insult that is often added to the "injury" of having a learning disability. I was a second grader in first grade; the other children were kindergartners in first grade. To make them feel comfortable, the teacher had all the desks placed in the middle of the room so we could all "skip around the class." I wasn't a kindergartner — I refused to skip. Sensing my anguish, the teacher sent me back to kindergarten for the rest of the week to learn how to skip. So much for empathy.

This teacher also used the EIF approach to teaching reading — Embarrassment Is Fundamental. She was actually surprised that I had just as much trouble reading in front of the class as I had trying to read at my desk. As a result, until I was 40 years old, any kind of public speaking resulted in ordinate anxiety and panic. Teachers called me "lazy and unmotivated" to my face. I began hating school. They told my parents, "He needs a fire put under him," and "Put a bomb under his butt." I learned to hide in the back of the room, with a book in front of my face, and, if possible, behind Billy Norton, the biggest kid in class. I wanted to be invisible.

Then, in the eighth grade, I met that "charismatic adult" about whom Robert Brooks often speaks. Mr. Tanenbaum taught science and he was "tough." But his toughness included structured, hands-on, and visual experiences. He used graphs and charts while challenging my conceptual strengths. Reading and memory skills took a back seat. I got "A's" instead of "C's" and "D's." Other kids, who always appeared quicker and smarter than me in school, were struggling to get "C's."

The effect of this experience in science class was profound. I began to see myself in a whole new light. I started to face those fears that haunted me the most. I committed to running for a class office knowing that in a month, which is an eternity for an 8th grader, I would have to SPEAK IN PUBLIC! In 10th grade, I ran for Vice President. The varsity quarterback ran for President. Two weeks before the election he realized that a loss would be a significant blow to his campus status. Since I would probably lose anyway, he proposed that we trade nominations. To his surprise, to my surprise, and to the surprise of some of my teachers (several of whom considered early retirement), I won.

College started badly. I didn't know how to study. I went to a challenging school and took 18.5 credits the first semester. I managed only 3 to 4 hours of sleep per night and still couldn't make up for my labored reading, slow processing speed, and poor memory skills. I flunked out after the second semester. In my second year at C.W. Post College of Long Island University, I gradually learned what I needed to know:

- First and foremost, reading the teacher is often more important than reading the book.
- Go to every class.
- Sit in front.
- Watch the teacher (make eye contact).
- Take notes.
- Review your notes immediately after class.

To counteract my failed freshman year, I took 56 credits in my senior year, almost double the average course load of 30 credits. Incidentally, my undergraduate degree is in engineering because it was the only degree that didn't have a foreign language requirement. Also, I never did learn my times tables (7x9 is processed 7x3=21x3=63, etc.) and, as a consequence, I did not do well in math in public school. In college, however, I was at home with the math concepts and abstract problem solving necessary to earn an engineering degree.

After college came a job, marriage, three years in the U. S. Army, children, and law school. Rutgers Law School used a Socratic method of instruction; understanding and being able to argue concepts was more important than remembering the name and date of a particular case.

Remediate, Compensate, Accommodate, Promote

My personal profile of unexpected deficits includes problems with phonological processing, memory, and processing speed. I also have unexpectedly strong visual spatial skills. A plan to address weaknesses should be to remediate that which can be remediated, then to compensate for those problems that can't be remediated, and lastly, accommodate those needs that can be neither compensated for nor remediated. The difference between these concepts is important. If you fill in a pothole it is remediated. If you learn to take yourself around the pothole, you are compensating for its existence. If you need help to get around it, you are asking for an accommodation. My profile involves a phonological processing deficit that can be effectively remediated, memory problems that can be reasonably compensated for by using digital recorders, taking notes and by finding a wife with a good memory and all of the skills that I lack. My processing speed deficits require that I have to request the patience of others (such as those who await this article). Of course, opportunities to promote unexpected skills should never be overlooked.

Dyslexia

The learning disability profile known as dyslexia consists of:

- Deficits in phonological processing
- Unexpected difficulties with single word decoding
- Conspicuous problems in reading, writing and spelling
- Difficulty attending to auditory stimulation as compared to visual and tactile stimulation

- Relative strengths in perceptual, visual spatial skills and math concepts (as compared to arithmetic calculation and language-based problem solving)

The following is the Research Definition of Dyslexia developed by the International Dyslexia Association and adopted by the National Institute of Child Health and Human Development:

> **Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental delay or sensory impairment. Dyslexia is manifest by variable difficulty with different forms of language, often including, in addition to problems reading, a conspicuous problem with acquiring proficiency in writing and spelling.**

Dyslexia is not diagnosed or defined as a visual problem or one that necessarily involves reversals, transpositions, and mirror writing. The task of the reader is to break the code, to map symbols to sounds. If a child cannot differentiate subtle differences in sound, he or she cannot break the code.

The inability to break the symbol to sound code and read efficiently is all too often seen as a measure of intelligence. What if we were dealing with a color-to-sound code? Would intelligence be correlated to color blindness?

Informed Instruction

Research for the last twenty years and practice for the last fifty years are converging on the elements that comprise informed, effective instruction for dyslexia, to wit, direct and explicit instruction that is structured, sequential, cumulative, phonics-based, and multisensory. The one aspect of such instruction that is most often discussed, most often overlooked, and most often misunderstood is the multisensory element, especially the use of tactile/kinesthetic input. Kinesthetic memory accounts for the fixed action patterns that help us through the hundreds of movements repeated in the same order without apparent conscious thought in the shower every morning. One word written with a finger on the palm of the opposite hand will unlock the door to long term memory and permit the retrieval of not only the single word, but also the whole concept it is intended to represent. If you know this trick, there is no good excuse to interrupt when another is speaking or to forget the "great idea" that came during a lonely ride in the car. The importance of reinforcing direct instruction with tactile/kinesthetic input should not be underestimated.

"We have gained enormous insight into factors that contribute to successful reading acquisition and explain failure," states Bonita Blachman, Syracuse University. "The knowledge children need to master in order to succeed at reading is well documented, and the kinds of instruction methods that are effective have also been verified," state Brady and Moats. (1997, Informed Instruction for Reading Success: Foundations for Teacher Preparation; A Position Paper of the International Dyslexia Association.)

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Fear Is Our Enemy

Self-advocacy is a two-way street. It is more important that we do for ourselves than have others do for us.

- Come to class prepared
- Sit in front
- Make eye contact
- Take notes as best you can
- Expand, summarize, or outline notes immediately after class
- Focus on concepts
- Highlight text
- Manage time

If you are like me and have experienced embarrassment at the hands of insensitive teachers, be proactive - discuss your concerns with the teacher.

I am a student with learning problems. I have been afraid of being embarrassed by teachers all my life. If you will agree to call on me only when I raise my hand, I will be able to set aside this fear and concentrate on what you have to teach. If you do this for me, I will sit in front, take notes, and come to every class.

We must all learn to sit in front!

CHAPTER SEVENTEEN

Teacher Education Reform: So What's Important?

Moderator

ROBERT K. WIMPELBERG, PH.D.
Dean
College of Education
University of New Orleans

Panel Members

CHARLES ACHILLES, ED.D.
Professor of Education Leadership
Eastern Michigan University;
President
National Council of
Professors of
Educational Administration

JEFFREY GORRELL, PH.D.
Associate Dean of
Research and Graduate Studies
College of Education
Auburn University

ROBERT BROOKS, PH.D.
Faculty
Harvard Medical School,
Former Director
Department of Psychology
McLean Hospital

REID LYON, PH.D.
Director of Research
Programs in Learning Disabilities
Language Disorders and
Disorders of Attention
National Institute for
Child and Human Development
National Institutes of Health
Bethesda, Maryland

MICHAEL FULLAN, PH.D.
Dean
Ontario Institute for
Studies in Education (OISE)
University of Toronto

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Wimpelberg: Welcome everyone. I invite the panelists to make some opening remarks in response to the set of questions in your programs or in general to the reform of teacher education. Let's begin with Jeff Gorrell.

Gorrell: The main message that I wanted to lay out here in this panel is that there is a lot of change going on in teacher education. It takes the form of the following things, and I'm not going to try to elaborate them right now. One is that standards are important and the in-task standards that have been created and are now starting to affect teacher education are going to become increasingly important. You'll see in the better programs that are starting to make changes in their teacher education programs or that have already made them that there is much more concern about training teachers to handle the many types of diversity, including linguistic, cultural, and ethnic. Course work is becoming more integrated, less fragmented, and less isolated. There is more student experience in school at earlier times and more meaningful mentoring going on in many different kinds of ways. The internships are improving, becoming deeper, more meaningful and also more integrated. Schools of education are working more and more towards building partnerships with schools that create a true partnership where they are helping each other become better and helping student teachers become good beginning teachers.

Now, all that is basically good news, but there's a lot of detail that I'm not going to try to address right here. However, I do want to try to address one of the questions that came up right at the beginning. The question was, "Where are there programs that may be pairing practitioners with professors?" At Indiana University they have a mentoring system where the students are paired up with teachers at the beginning of the teacher education program. They are actually in the classroom one day a week at the beginning of the teacher preparation program and learn and grow through that. In combination with that you have university professors and other faculty and students working in teams who are trying to deepen that kind of experience. Now, they may go beyond simply having a practitioner and a professor matched up, but it's all in the same direction. You'll see something similar at the University of Cincinnati, which has been doing a lot of partnering with teachers in schools for quite some time.

With regard to diversity, the problem is that our students don't have the diverse backgrounds to deal with the many different kinds of students that they're encountering. When we poll our students at the end of their programs, this is something that they say they need to know more about. It used to be that the thing that would be most commonly mentioned would be classroom management. More and more students are saying that they don't know how to communicate well or to teach well to students of different racial, ethnic, linguistic, cultural, religious, or geographic backgrounds. That's something that good teacher education programs are starting to deal with much more and need to deal with much more.

CHAPTER SEVENTEEN

Achilles:

My business is training school administrators, but outside of that I tend personally toward being a generalist. I hear all of these calls for teacher education reform. That's a solution, but I want to know what the problem is. I've not heard the problem articulated well enough in any of our discussions to work toward a solution. Teacher education reform is just a broad-based, politically safe solution. What's the problem? This morning I heard Reid Lyon explaining that we know a lot more about reading research when it gets into the classroom. That, in fact, is good information, and that sort of thing needs to drive what we do in teacher education. But that's true in any field. When I go to a doctor today, that doctor is using the newest technology and the newest knowledge. That doctor may not have learned that in pre-service preparation, to use a teacher term. The doctor learns that by the notion of professionalism. That's sorely lacking in our field. We drive ourselves by standards that political and business leaders set, not by standards that the professionals set. If we have any sense at all, we need to establish the professional standards for teaching in such a way that we take advantage of the sorts of things that Reid Lyon told us about this morning. I personally am very frustrated at professors, teachers and administrators who do not know the current research in our field, and who go ahead and knuckle under to political statement.

We have had sixty years of research on the evils of retention in grade. I read in the October '97 *Journal of Pediatrics* the evils that retention in grade or old for grade are bringing to youngsters in the practice of pediatrics. I'm surprised the people in education haven't done these studies. We have to look outside to medicine. But we let our politicians stand up in front of us and tell us to do this without ever raising a voice. That's why I'm with teacher education. You and I and others need to understand our research and speak strongly in favor of it. Picking up on Reid's comment this morning, he said he runs into a buzz saw philosophically and emotionally when he tries to get this research in use. From my perspective, I add politically and fiscally. Because of the need to make the kinds of changes we need, we really run into so much emotionalism. It's almost impossible to convey, at least in teacher education, to new teachers the things they need to know to be effective the day they walk in the classroom. Teacher education, if it does anything, has to teach those young teachers to work constantly on staying up to date in what they do in the field.

Starting almost twenty years ago, Glass and Smith did an analysis that pointed out to us that class size makes a difference. We completed Project Start experimental portion in 1989, and not only do we know that it does make a difference, we know when it makes a difference how big a difference it is. We've been doing follow-up research now and we know that we can reduce class sizes in the United States at almost no cost. Yet I read how expensive it is. Nobody's come and asked us what we know because of the political agenda not to reduce class size, but to put the money into education savings plans or into vouchers or something else that has no research base that it works. Educators roll over. So my argument is that teacher education probably doesn't need reform. I don't know what the problem is yet. I'd be glad to listen to it and see if we can find what the solution would be once we know the problem.

Lyon: Chuck has articulated sentiments that I do agree with. One of the critical things I don't think we do is base our actions on solid information. I'm not a reform specialist and don't know the ins and outs of the complexities of that. For some reason it's been extremely hard to help our teachers be conceptually driven on the basis of the research information rather than method driven. This could probably be applied to conceptually driven versus reform driven. Let me give you an example. When you talk to teachers or when we're doing our school-based research and we're bringing these intervention studies into schools, it's very difficult, if not impossible, to randomize our teachers to different conditions and then provide them a year's training. We do this in the particular intervention they'll use or the teaching tactic they'll use, because they've in a sense already been conditioned to be either or. It would be wonderful in our training if we also addressed another dichotomy, content versus pedagogy. All too often we find our teachers asking these kinds of questions at the end of their training: Should I teach phonics or whole language? Should I use Houghton Mifflin or Ginn? Or should I use Reading Recovery? Better questions would be the following: What does it take to learn how to read? What does it take to learn how to write? Then they can apply that information to the children that they will be working with. What parts of this learning process does the child not have? What parts does he have?

Then these new teachers can be flexible and dynamic in selecting a variety of representations or teaching tactics from a variety of these polarizations. It's not either or.

I still don't know what the cognitive barrier is here when we talk about instruction. We're constantly drawn to phoneme awareness as this powerful term or phonics or whole language. In actuality, different approaches for quite a few kids are more important than others are at certain stages of reading development. If I didn't get that across I failed this morning. One of the hefty reasons why I think we have a lot of youngsters moving awry in terms of reading development is that in searching for these solutions we've lost sight of common sense. The common sense is that content should drive practice.

Chuck talked about the medical profession and I work inside that profession at the NIH. I would say that clinical physicians providing service on the line are as resistant sometimes as are teachers or psychologists or preachers or whoever to take hold of new information and apply it. The difference in medicine is that there is a fairly weighty accountability system that the lawyers make sure everybody kind of adheres to. But this is not as relevant to education. I think many, many professions go through the same dissemination problem or difficulty trying to get information into the line level and into practice. I don't know what we can do. I think we do have to have some very strong dialogue. I also think teachers are going to help us, more than a number of other resources, try to understand how best they can be taught. How can they best be provided information that allows them to be flexible problem solvers using the best information about a particular content and the best information about how to deliver that content given the massive individual differences that are going to be out there?

Other examples that we are already starting to look at are the cultural diversity issue and brain research. Let me take the former first. We are about to embark on a $5 million a year study for at least five years to understand what it takes to teach children whose first language is Spanish to read in English. Notice there has been bilingual education in place for years. Notice there's been immersion in place for years. Notice also that none of those approaches to teaching Spanish speaking youngsters to read have any solid database. We simply do not know what there is to know. When I was drafting or designing this particular study for NIH I was extremely naive. I said, "Why don't we have some kids being taught to read well in their native language and then transition them to English? This brings up the secondary question of when to transition. What is the level of facility they have to have in reading in Spanish before they can move to English? Let's take another group of kids who are equally placed in their Spanish speaking and immerse them into English. Well, then I get into the reality of things. There are different kinds of Spanish spoken across geographic regions. There are different reinforcements within the community and the home for bi-language usage and so forth. We don't have any assessment devices to even know the level of Spanish reading or English reading in these populations. So we have to back up. I think reforms probably will move these things down the pipe in this way and that way, but they'll be ill-informed and it's going to take us at least five years to get the lay of the land about how you do address diversity in one content area called reading. We don't yet know enough.

There sometimes has been a culture in colleges of education that anything goes. For example, the buzzword these days is research-based. Everything is research-based. I don't know if you guys hear that down here, but I hear it all over. We're using research-based programs. Well, I will tell you the truth and you know it. There are research-based programs and there are not research-based programs. Not all research is equal. There are serious qualitative indicators of good solid research. One is that it has to be consistent and another is it has to be valid. This is very simple. Just because somebody collects numbers doesn't mean it's very good. The research base on the whole language literature issue is terrible. I know that's going to hurt people's feelings, but we can't even get some of the best-cited studies through any kind of robust peer review.

The other issue is brain research. We do a lot of brain research, probably the most in the world where I work. These pictures look neat and glitzy, but they don't tell us a lot, folks. They tell us that behavior is clearly driven by the brain, and that generally is common sense unless you're dealing with Congress. But brain research is at its infancy. As I mentioned this morning, for the first time we're doing studies we probably should have done years ago, which is to push the brain and watch how its physiology changes as the behavior changes. With all of this, however, there's nothing that's going to replace good teaching in terms of moving kids along in some content. It's not going to be brain research. That'll give us basic information about individual differences, but good teaching is still going to be the key. We can't use some of these tangential, exciting areas as proxies for the hard work we need to do. We need to know our stuff, and we need to have that inform our training practices.

Fullan:

I'm going to make two negative and two positive comments about the set of issues we're talking about. First, we did a study for the Ford Foundation that came out about a year ago, that looked at teacher education reform from 1986 to 1996. We entitled our report *The Rise and Stall of Reform in Teacher Education.* This was not to be cute, but really to say there was a lot of activity in the late 80's and early 90's, but it began to flag as '92 to '96 came along. John Goodlad reviewed the report and agreed with us, but he wanted to call it "The Rise and Stall and Rise" or "Re-rise." I guess he thought new things were happening, and I agree that some new things are happening. However, I wouldn't even call it a rise. I would call it the arrival of reform in teacher education, but so far it hasn't arrived.

The second negative is perhaps a bit more harsh. I would say if you had to design teacher education to produce the opposite of what is needed, that would be traditional teacher education. We can think of traditional teacher education as a number of individual student teachers. I'll just use one dimension, going into individual seminars and lecture halls and being taught by professors who model individualism, going out to individual classrooms on a hit or miss basis and then graduating. Then we tell them to be collaborative. It doesn't really make sense, and I have only used that one dimension as an example of a far more pervasive problem. I will say the problem is that the knowledge base we have about what is needed for reform in schools is not the knowledge base of the teacher education curriculum, traditionally.

On the positive side, we do see now some movement and some programs that are different. Somebody asked about what those programs were that matched schools and school people and professors. Linda Darling Hammond recently analyzed one set, which describes seven exemplary programs across the country by name and then analyzes those and brings out the common features of what those programs look like. Carol Rolheiser from our faculty is another leader of one of those typical new designs. In our own case, the one that Carol leads is a two-year program after the B.A. that is based on three design criteria, and this is typical of these new programs. One is that we work with cohorts of student teachers in multiples of 30. Second is that we have a team of faculty including a full-time member from the school system who is hired and paid for by the university and who is on the team full time. The team designs the program for the cohorts. Third, we are linked into a set of partner schools and the partner schools are in the business of teacher education and the university is in the business of school improvement. They both recognize that, and that's part of the reciprocity of that relationship. So, in that interrelationship and three-part design you get opportunities for a two-way relationship between theorem practice where 150 of the 300 days are spent in schools. In a different design the internships, for example, are groups of six. I'll just take 60 as a unit, because that's the most recent one. These ten partner schools have six student teachers each for an internship. Those six student teachers work as a cohort and develop collaboration among themselves, but they also are working in the context of the school community, not just the individual classroom.

We need to deepen the content of what is experienced in these designs, but the fact that they exist is an important development. We see many more instances of it now even though I think the fundamental problem is two-fold. The incentive system of universities is not conducive to this and, secondly, the professors of education are afraid of working this way because they're not accustomed to being in that kind of context. They're used to being in other contexts where they mainly write for each other. So, there's a big change going on in the professorates that requires a deeper part of the story.

My second positive point has to do with standards. I'm thinking now of standards for students as well as standards for teachers. We have in our

What's Worth Fighting for Out There? six guidelines for teachers. One of those six guidelines is the need for teachers to become assessment literate. I'll just use student achievement as the illustration, but it applies to performance-based standards for teachers as well. Assessment literacy is three things. One is the ability of teachers to examine student work and student achievement data and make accurate sense of it. Number two is to be able to take that understanding and to make changes. The third aspect of assessment literacy is to be able to become assessment literate enough so that you can enter the fray or the contentious debate about the uses and misuses of achievement data as the accountability system gets more and more intrusive.

Finally, I don't believe the teaching profession will have arrived as a profession until it can own some of the reform agenda instead of always implementing somebody else's reform agenda. I think that's the goal. When I say own the reform agenda I mean they need to do it in partnership among themselves, with parents and the community, with university partnerships where appropriate, and so forth. The exciting part is that it is on the move. There are tremendous problems, but there also is some clarity about what direction to go.

Brooks:

Years ago I wrote a book with Mel Levine for pediatricians. We asked pediatricians who were in training to name the one skill they needed most to be a good pediatrician that they felt they were not getting. Would anyone like to guess what it was? They said interviewing skills. They said,"We know a lot about how to handle this and this and this, but you know what? We're speaking to people who are walking out of our office who have absolutely no idea what we've said." This leads me to look at this issue of standards from my own perspective. I think we have to have standards, but the other issue for me is what are you measuring when you're measuring standards? We now have high stakes testing in Massachusetts. The results of these tests are published on the Internet. You can find out how every school is doing in Massachusetts. There was a school in Newton, Massachusetts, which had the highest scores. Now, Newton is an affluent community, and this school has only 220 students. They have been preparing since day one for kids to take this test. I bring this up because I want to look at what we truly measure when we measure kids' achievement. They interviewed kids in the school and asked them if they were proud of what had been accomplished there. You know what the first two or three kids said? "They taught us how to take tests. They didn't really teach us. The whole pressure was how to take tests, how to take tests, how to take tests. The teachers were so anxious."

This brings me to this point. If you're going to test for what we are training teachers, I would ask each of you to think about this. Without a doubt, you would want any teacher who teaches your child to know the subject matter and the content. That is a given. I've been very influenced by Daniel Goldman's research, and I heartily would recommend his next book, ***Non-Emotional Intelligence***. It's working with emotional intelligence. Bringing this down to the teaching level, I wonder how we are applying this to our preparation of teachers. Teachers can have all the information in the world, but if they get stressed out, what good is it?

Teachers can know all the information in the world, but if they don't touch kids with excitement and motivation, what good is it going to do? I've been in hundreds of classrooms in this country where I want to walk out of some within five seconds because of the oppressive atmosphere. Others I want to stay in for the rest of my life. The teachers in both of these kinds of classrooms knew information and skills. In one of them, however, there was something vitally lacking. What did the teachers in this kind of classroom need? I think what a lot of them needed most were some mentors who really knew what they were doing. They needed very practical experiences. They also have to know all the research on not just skills and content, but also on motivation theory. They have to know all the research on empathy and the role it plays. I would like to see undergraduate programs focus more on that. However, none of this should be at the expense of learning skills and content.

I will bring up just one other thing. Last year I read a very interesting article in *Teacher* magazine. In it they looked at schools where teachers were less stressed so they could be more effective using all of these new ideas. They said the most powerful help to the program was to discuss stress-hardiness, and they mentioned several model programs. They also mentioned that teachers need the same thing that students need when they are stressed. They need one or two people at the school who are designated as support staff. These are people that the teachers felt comfortable going to with problems because other teachers respect them. Teaching is very isolating, but in those programs, the amount of teacher absenteeism dropped. Isn't this interesting? In addition, the amount of discipline problems dropped, because if you're with it, you have fewer discipline problems. My point is that these are the kinds of things that I look for when I look at reform. Are we teaching people about E-Q? Why don't we also have tests for empathy, interpersonal skills, and things like that? In books like Goldman's we learn that emotional intelligence is as important for success as high SAT scores. In fact, often the two go hand in hand. Lately I have been invited by more and more CEO's of various businesses to speak on the subject of emotional intelligence. They truly have seen the value and use for this in creating a more productive workplace. Yet, I've never been asked by a group of principals to come and discuss this concept of emotional intelligence and how it relates to how we can train teachers so that they will be much more effective.

Fullan:

We can imagine teachers getting more assessment literate on interpreting assessment data, but it's harder to identify what would be involved to use this data to make changes in the classroom in the school, which is really school improvement, action and planning. It is harder to create change than it is to interpret a measure of something. It's hard to get at that when you look at the research on collegiality in collaborative schools because it's very convincing, but it's also superficial. You can't get inside the microdynamics of the school that might be doing that. However, I might mention one case study of an elementary school outside of Los Angeles, which is largely Hispanic. There they took the knowledge about change and asked what kind of model for change they would set up for their school. They had a low performance on literacy and wanted to do something about it. Teachers looked at assessment data and derived questions about how they would change their teaching methods. The inside story is that small groups of teachers looked at student achievement data, planned instructional and other aspects of change in the school, and as a professional community, got that to happen, and all the while monitoring it to see how they were doing.

Many teachers said that the best professional development they ever had was when they were involved in understanding student work and achievement and as a result made changes in their teaching in order to get better results. That's the best and most specific form of positive change, because it was at the heart of doing something by a teacher, whereas achievement scores by themselves are alienating. If you start to tie change into individual student performance, get other teachers comparing notes with you, and build that into a school improvement plan, then you will see how well you're doing. The message is that teachers and schools need to become that good. They need to become that specific about zeroing in on this, and not as individuals only, but as subgroups within the school system.

Achilles:

When I teach graduate education courses one of the first questions I ask my students is what have you read lately? Teachers don't read. School administrators in the main are not particularly well-educated and really don't interpret their reading very well. Now, you're not going to like to hear that coming from a person who teaches these people. But the first and most cost-effective thing we could do is get people out there to read. We have studies after studies in my field that people in our field don't read. They go home, they flick on the TV and they go to sleep. The most cost-effective procedure for improving teacher education in America today is to get teachers to read.

Brooks:

What is in it for a person to read? Now, Chuck can go all over the country and say you should read, but that would be like a teacher who says to a kid, you should read. If you have a goal and the goal is for people to read, then you have to look at what the obstacle is to reaching that goal. It comes back to what motivates people? What turns people on? You've got to look at what is going on in our society and in our schools that causes a person to come home and watch TV. You know why? Because it's more fun to watch TV because many of these people feel they actually have had absolutely no impact on what's going on. I remember once reading a study about when they let teachers in Dade County, Florida, finally have what we call school-based management. Teachers said, "We're working more, we're reading more about the research, and we're doing it for one reason. We finally feel we have a sense of control." Remember that third C, the sense of control that is going on? For me, the problem is there. We have to look at why. Think about yourself. Do you always read? When you've had a tough day? You know why I read? I'll tell you, it's what I said this morning, and it's not to set myself up on a pedestal or whatever. I read because I really do think I can have an impact on a school or a kid. But if I'm going to have the impact, I better have as much information as I can. But what if I came home and felt what's the use? Everyone feels what I'm doing is worthless anyway, so what's the use?

Just to add to that, it's not only that you don't feel that you have control, but teachers are inundated, bombarded by new things in a cyclical fashion every so many units of time. The culture is one of non-trust for a lot of these things that we're asking teachers and administrators and systems to inculcate. It goes back to the professionalism issue that we've really got to take extraordinarily seriously. I know that sounds kind of fluffy, but here we have a profession of individuals carrying out an extraordinarily complex job. You know, we study how many interactions teachers make or do with kids every day and there are quite a bit significantly more than air traffic controllers: the number of variables that have to be controlled, the content, the pedagogical issues, and so forth. Like physicians, engineers, or architects, teachers should be in some control of what their content is and what their delivery methodology might be. But look what happens. Every so many years something comes down the pike. In recent Congressional testimony, Senator Kennedy said, "Well, but that's different with textbooks, right? When you're, you know, you're using textbooks, when your system buys textbooks to teach reading for kids? That's all had very good teacher input and that's been researched and so forth. Right?" Now, he was blown away to understand that not one textbook company has ever run its content through clinical trials to determine for which kids those textbooks might be most beneficial. So teachers are stuck with something that is market-researched: Is the table of contents attractive? Does it pass the soft thumb test? How good looking is the sales rep? This is a cultural issue that does have to change.

And when you're talking about control, people have to have intellectual control of their job. That, again, is going to stem from the training they receive. We have 11,000 children going through clinical trials now with over a thousand teachers in many, many schools. When we ask these teachers as we go into these places about their teacher preparation, and we ask how many teachers saw a professor model and demonstrate a particular teaching interaction with real live children, it's less than one percent. To try to provide professionals with content that's going to be strong enough with direction and that's going to be guided enough for them to actually carry out the interactions, they've got to watch just like anybody else does. Less than one percent of our nation's teachers get to watch a master at work, and when they do, it's in the schools that they transition to in student teaching or internship. Then the content and methodology that the teacher may use is different from that used in the undergraduate or graduate training. So you've got these mismatches up and down the line, this lack of systemization. I'm not talking about lockstep, I'm just talking about learning something, watching how it's applied, applying it yourself, having good, constructive feedback, and doing that in a collaborative situation. Those kinds of things all contribute to this motivation issue.

Wimpelberg:

Let me just support colleges of education here for a minute. Teachers tell me overwhelmingly that when they have smaller classes they don't do anything differently. They just have time to do what they know they should do. And that goes back to their teacher preparation. I work in a college that prepares a lot of teachers, and I believe that teacher preparation is doing a far better job in this country than the popular media allow us to believe. What's happening is we're in colleges of education today that are preparing people to fly jet planes and your legislatures and others are putting them in places where propeller planes will barely land. They just can't go down that highway any faster when it's full of potholes. A teacher in the early elementary grades, particularly, can't teach twenty-five to forty kids. Take a look at what we do for new teachers. They have orientation and they have mentors. Take a look at what we do with Johnnie when Johnnie comes to school for the first day. Sink or swim, you little devil. Here are thirty-five others you don't know. Right? And then you have to make it work. No, no. We're not starting kids right and then we're blaming teachers for things the legislatures won't do for us. Namely, give us conditions in which we can teach.

Okay, this is a great, great place to call a halt to this because now you know whom you want to talk to. Thank you very much for coming.

CHAPTER EIGHTEEN

Accountability

Moderator

BRAD GIFFEN
ABC 26 News Anchor

Panel Members

CHARLES M. ACHILLES, ED.D.
Professor of Educational Leadership
Eastern Michigan University
President, National Council of
Professors of Educational
Administration

ANNE HENDERSON
Education Policy Consultant,
Center for Law Education,
Washington, D.C.;
Institute for Education and
Social Policy, New York University

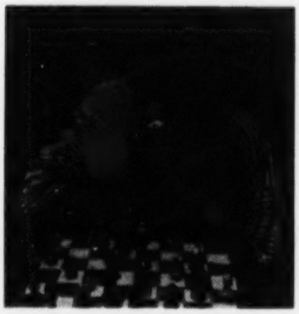
EMERSON DICKMAN, III, ESQ.
Attorney at Law
Maywood, New Jersey

ROBERT BROOKS, PH.D.
Faculty
Harvard Medical School;
Former Director, Department
Psychology, McLean Hospital

MICHAEL FULLAN, PH.D.
Dean,
Ontario Institute for Studies in
Education (OISE),
University of Toronto

PRISCILLA VAIL, M.A.T.
Learning Specialist
Bedford, New York

Giffen: Good afternoon, everyone. It's nice to have you here. I'm Brad Giffen from ABC 26 News in New Orleans, and I'm here to talk about accountability in education. I was doing some reading recently and came across a study that shows that one in every five children does not respond to the usual methods of classroom instruction, and left unchecked that can lead to an educational crisis for them. I have some firsthand experience with this as a parent of a bright, articulate, 8-year-old boy who is struggling to maintain his self-esteem right now. He's also stumbling badly in third grade basics such as reading and writing, and yet he's got this marvelous idea that he wants to build a time machine. He's a tremendous little fellow. I love him very much, but it's heartbreaking to watch him struggle with this basic concept of reading and writing. His penmanship is just terrible. Anyway, that's my firsthand connection to millions of children in our country, many of whom are right



here in the Orleans Parish school system, who are suffering from lack of understanding. We should all be concerned about this, for their failure impacts on all of us. So, who's to blame seems to be the question. However, we might do better to identify the problems and then ask how we can correct them. We also need to consider who is accountable when our children find themselves in these situations. That is the question that we are going to start with today. Let's begin with the definition of accountability.

Achilles:

I have several definitions. One that I think we want here is accountability in relation to the schools and schooling. Personal accountability means that I'm responsible for my actions and actions have consequences. In the nature of schooling, accountability is first of all a sharing situation. Accountability is when a teacher, a school administrator, or any other school person takes the responsibility for those things that that person establishes the right to do. I don't consider it accountability when the school board says we want kids to get this score and this is how we'll do it. The school board maintains that accountability because they told me how to do it. When they say I want kids to do this and turn to me and say, "You use your professional skills to get there," then I become accountable. So often I see accountability thrown at teachers and school administrators when there's no room for accountability. That's when the school board says we will get rid of social promotion, and we will do all these things. Then the school board is accountable for that, not the administrators and not the teachers. I think that's the issue you want to get into here, rather than the personal one.

Brooks:

You know, I had a great deal of difficulty being able to answer this question myself until I heard Dr. Fullan this morning, and he gave me a key that helped me understand. After 25 years of being an advocate for children, it's still really difficult for me to point a finger at the parents or at the school or at any other particular instrumentality for being accountable for what's going wrong. One thing that Dr. Fullan said this morning was that professional learning communities must become critical consumers of government policy. If I were to point a finger at the one institution in the field of special education that is probably most responsible for the things that are wrong in the field, I would have to say it would be government policy and legislators. I say this because there are a number of systemic weaknesses that make it difficult for all the parties we would usually seek accountability from to be able to do their job in an effective manner. For instance, the Aptitude Achievement Discrepancy Formula that is used to identify children with learning disabilities under the federal law is really built upon the basis of administrative convenience and not built upon an understanding of what the child needs. It's a failure model. "It prevents prevention," as Jack Fletcher from the University of Texas has said. Another individual who does a lot of work on the Woodcock-Johnson for you teachers has said that you have to cross a threshold of failure in order to obtain services. So, using this Aptitude Achievement Discrepancy Formula, whom do you blame? The federal government, through a policy that's intended to provide administrative convenience, has established a formula for selecting which children are going to get help and which children aren't going to get help based upon the fact that they have failed. Now you have a child with co-morbid problems. They have a learning disability and they have suffered failure. There are a number of other systemic weaknesses which I won't get into at this time. I'll save that for later. But if I were to point the finger of accountability at this point in time I would say it's the difficulty school districts have in doing exactly what Dr. Fullan said, and that is becoming critical consumers of government policy. They're not questioning the policies that are being foisted upon them by legislators and people in the field that are trying to make things efficient for administrative purposes.

Fullan: I want to address two dimensions of accountability. The second one actually is quite subtle until we define it. But the first one is the external standards. We were talking at a lunchtime meeting about the imposition of tests and the way that that sort of throws things in the wrong direction. I think ultimately that society has a right to worry about the external standards of learning and that it has a right to help formulate what those are in relation to various domains of performance. If they could only, in a policy-making sense, think of that not as a first step towards punishment of schools not doing well, but think of it as the first step in getting better, they would be on the right track. In this way a lot of the clash of external accountability and internal development would be more able to be productively addressed. That's one area of work. There's a lot more work that needs to be done. The other part is that when you build in what I call the learning community, that is, teachers working with each other, parents involved and so forth, you actually build in a very powerful form of lateral accountability. That is, as people are interacting with each other, it's way more effective than hierarchical accountability. When you are working with another teacher, when he or she is watching you teach, when you're changing, or when you're doing all of those things, you're looking at the results of your teaching. There's enormous pressure in there, but it's more seamless. It's more organic to the relationship, and that's why it works better because it's built in. So one of the things that I'm talking about building in is the internal accountability that comes from people working together, and it's not a soft form. It's actually more effective than the hierarchical, although I think in some ways we need both the external standards and the internal lateral accountability that I just described.

Giffen: I love the idea of lateral accountability. To me, accountability is all about accepting responsibility to do something about a situation. You don't have accountability when everybody is blaming everybody else. A lot of our urban systems become so large and dysfunctional that it's just a situation of everybody in the system saying, well, I'd like to do something but I can't because of this, or it's against policy and social conditions, etc. However, underlying this is the fact that you can't accept responsibility if you feel you have no power or authority to do something about that which you see is wrong. Until we really learn and establish that all children can learn, we don't have a sort of moral mechanism to have accountability in school systems because schools could get away with saying, "Well, we'd be a good school if we had different kids. If they just sent us better kids, we'd be fine. We're offering a wonderful education. It's the kids who are failing." Then you get all of these remedies like ending social promotion and telling kids they can't graduate unless they pass these tests when you're not giving the kids what they need and deserve to be able to do that. For far too long schools and school systems have gotten away with that. They have said, "Well, we just can't cope with the situation that we're getting. The kids that come to us don't know how to read. They don't have any social skills. So, what can you expect of us? We can only work with the most motivated kids." So nobody felt that they had the power to do anything about the situation. Now we know that's not true. We know that there are schools that have a hundred percent low-income kids from all kinds of diverse backgrounds whose family's education level is very low, and within a few years those kids are performing at levels you would expect to find in upper middle class suburbs. There are not many of them, but it is happening, and if it can happen in one place, it can happen in some other place, too. I think that, now that we know this, we can hold everyone accountable because there is something that everyone can do.

Anne, you touched on an interesting point, too. Very often students who get the greatest amount of help are those who are either at the top or the bottom end of the scale. The ones in the middle, the vast majority of students, are pretty much left to try to deal with the education as it is presented. Of course, the education doesn't become customized until you either are failing badly or excelling well, and Priscilla Vail, I have to wonder if perhaps that's one of the areas where schools have to consider changing.

Vail: It seems to me that from the studies that have been done by social scientists and people who have studied heart disease and stress, everybody agrees that the most uncomfortable position to be in is to have responsibility without authority. You just stop and you churn. As we are looking at questions of accountability and the constituencies that are named into this charter, there's no hiding place for anybody. We've got to do this together. Instead of always saying what's wrong, we need to look at what works and look at some of the models of schools that are successful. There are three or four really common threads that come up in schools that work. This is where everybody's accountable. First of all, it's what Dr. Achilles says about class size. Second, it's about a school in which every child's name is known and spoken by the administrators every single day. Third, it's about setting reasonably high expectations for many, many kids in disturbed, stressed home situations and wild, crazy cultures. School is an island of safety in a world gone mad, and if we set reasonably high expectations and say to the kids, "these are our expectations, you can do it, we're here to help you," what we're doing is confirming in the children's own minds their own intactness. Fourth, we need to find a way to get the parents involved. We keep hearing that parents don't show up at school for conferences. Well, the fact of the matter is that a lot of parents are scared to come into the schools. They don't want to. It's where they failed. It's where they recall bad things and the smell of the chalk and the look of the blackboard. Man, they don't want to go there. But, if someone sets up a card table in the local supermarket and puts up a sign, "Principal here Wednesday nights from 4:30 to 6:00," some mother pushing her wagon with the peanut butter in the cart will drop by and say, just for example, "What would you do if Jimmy didn't do his home work?" If we want parents to join with us in their kids' education, we need to go where they are, not only ask them to come where we are.

Brooks:

There can't be accountability unless there are very set, established, or clear goals and expectations. But who sets these goals and expectations? It must be all the constituents who are involved in the education. Sometimes goals and expectations are set and then handed down, and people are asked to do things that they have not been involved in setting. We must also not forget that the term "constituents" includes the children. In many schools now where we come in with school-based matters, I almost always insist I want to be with the kids. And don't just give me your "A" student. I want to sit down and interview all kids because it's very interesting to me. We talk about change and the process of change, yet we often don't hear the voices of children. Those of us who have interviewed thousands of children over the years know that even four and five-year-olds can already start to tell you what is going on in the climate in the school in language they can understand.

There is one other thing I would like to mention. This has to do with stress-hardiness. Many of us hit our heads against the wall, focusing 95% of our energy on what we have no control over, rather than what we do have control over. Let me give you an example. I went into a high school, inner city high school, in Boston. The teachers were rather burned out. When I went in there, I went over stress-hardiness research because I really wanted to get to what I call the deeper level. I said, "Do you focus on what you have control over? All the research shows that if you feel disempowered and focus on what you have no control over, you're going to be burned out." The teachers all said, "Bob, we're only focusing on what we have control over." Then I asked this question. "Okay, what do you think will help to make your job better?" One of the teachers started saying, "I'll tell you what would make our job better. If the kids came from less dysfunctional families." If we had more of this, and more of this, and more of this, and more of this. About twenty seconds later, thank heavens, there was a very young teacher who cracked up laughing and said, "Look what we're doing. What we say will help to make our job better and change this school is everything we really have very little control over." And I said, "No, you do have control. You can put an ad in the paper and say 'I will only work with children who come from functional families'," and on and on and on. The reason I bring this up is that you can't be accountable unless you have helped to set the goals and expectations and guidelines that you are going to follow. If you feel that some things are not right, you cannot wallow and say, "Look what all these external forces are doing." You have to be a change agent. I read a wonderful article, written by a teacher that says that if you work in an environment where you feel you can't be a change agent, then focus on your wiggle room. You have more room to wiggle than you realize, and you can start effecting change and soon other people will follow. I don't want to be held accountable if someone says to me, "This is how you have to do it." I want them to say, "You are Bob. You are a principal of a school with murderers, rapists, or whatever. You tell us how you want to help these kids." That's a much different accountability. Then I am setting the goals and expectations and creating the environment. But I will make a strong plea that, when you're going around meeting and deciding what to do with schools, you interview at least a hundred students in that school system. Have you found out what they feel? This information is often lacking in many schools and many research projects that I have seen. It's kids.

Giffen: We had a number of questions that were submitted from our panel, and I want to start in with a few of these now. I'd like you to consider this one first. Should a teacher's effectiveness be based on his or her students' scores on statewide achievement tests as it is implicitly and not so implicitly done in a number of states? Some replies on that?

Achilles: I don't object to that notion a hundred percent. But I go back to the point that I made earlier, and I want to review it before I answer your question directly. I don't mind if my students' scores are a measure of my success as long as I'm allowed to use, in achieving that success, what my professional training has taught me to use. I am reviled at the notion that somebody will tell me not only what to do, but also how to do it. I've had many years of training in solving the problem of how to get from point A to point B. When somebody says you will do it this way, and the "this way" statement goes against all the research in my field, I cannot be held accountable for students' success under those conditions. That is what's happening much too often in our field. Michael Fullan says it much more comfortably when he uses the term "critical consumer of government policy." I get much more hostile about it much more quickly. It's the issue of identification of the problem. Once the goal is established and it's a reasonable goal that the community and others accept, I want them to use my professional knowledge to solve that problem. I want to bring to it the how to do it. Now, if I miss, then I could be held accountable for not doing it. But if I'm told what to do and how to do it, accountability is no longer mine, it's somebody else's.

Giffen: So you're suggesting, in other words, that if you are given the recipe for the cake, in this sense, and the cake doesn't turn out, then how can you be held responsible?

Achilles: That's essentially the point that I am making. One individual stated it this way. When the kids come to school, that's the first team. The parents aren't keeping the first team back to see how you do with the second team. So we don't get lots of chances in this. We've got to do it right the first time. I'm perfectly willing to be held accountable, using test scores or whatever, as long as I have input in how we're going to get there. That's the "how" question. I don't want to make it sound simple, but to me the "what" question is a public policy question. It's the government issue. It's the parent issue. The "how" question has to come from my professional knowledge. So, I don't mind being held accountable in test scores if I have that kind of say-so.

Giffen: Dr. Fullan, as the dean of a body who does teach teachers, this is obviously a topic that's come to be very close to your heart.

Fullan: Well, I spoke this morning about the need for teachers to become assessment literate, and I guess I take a different route to this because I take as a given the inappropriate imposition of policy as a solution. I take as a given that politicians and the public are not going to be satisfied with what might be described as a more rational route to get at this problem. So, if you take that as a given, then it seems to me that the issue is how teachers can ban together with each other and their communities to really try to influence the agenda of accountability. To really be able to do the things that we say should happen, we have to be able to create the agenda. We must start with teacher education. Most teacher education programs do not prepare teachers to deal with assessment of learning. They don't because most professors don't have a tradition of being good at that. It's a recent phenomenon in the last five or so years to really look more carefully and more sophisticatedly at what we mean by performance-based assessment. How do you critique achievement tests? All of that knowledge, that practical knowledge to be able to be what I call assessment literate, has to be built up. It would help if schools were in a partnership with the university where teacher education was working at this problem in the first place. I believe it is entering now in the teacher education curriculum. If we can build up this assessment literacy, teacher education on the job, then teachers will be in a much better position to do the things that are being talked about here across the table. They're going to be able to blunt some of the wrong-headed policies. They're going to be able to link into accountability. They're going to link to parents differently and a whole set of things.

Finally, I wanted to come back to what Bob said a few minutes ago about students. I agree entirely with him that students are seen as the recipients of learning for better, for worse, other than as members of the organization or members of the community. The next frontier of leverage on change, I believe, is to mobilize students to change the student culture of learning. We have done it with teachers, although not enough, but we haven't done it with students. We have seen little snipits of it appearing, but nobody has gone full force on that question. It's a fantastic frontier to tackle.

Brooks: I get so passionate hearing someone like Mike say that. When I was asked to be head of the quality assurance committee of my hospital, this was very interesting. The first two people I appointed were two of our kids who were hospitalized. You would have thought I was appointing Attila the Hun and Hitler to this committee. It was amazing to me. You know what I heard? They are only kids. They are only patients. But, you know, because of those patient kids we developed a whole admissions classroom because of insights they had. They said, "You put us in a classroom right away, but the first week you keep taking us out. We don't feel like we belong because you're taking us out to test. You should have an admissions classroom." And then one of the kids said, "We don't even like testing. Why do you do it?" When I explained about why we do it, she said, "Now that I understand better, you need a buddy system." I said, "What's that?" And I'll never forget this. She said, "A buddy system is when the psychologist and teachers sit down to explain why a kid is being tested. You need one of us who's already been tested to sit down and explain it, also." I said, "Yeah, and you'll tell the new kids who are being admitted not to let them test you." She said, "Dr. Brooks, I'm surprised you would even suggest this. I am now a member of the quality assurance committee." I bring this up because I totally agree. That's a whole new frontier. I just want to reinforce it, having seen that when you talk to kids they will tell you a lot about what's going on.

Giffen: Emerson, do you find that children are a forgotten part of this equation?

Dickman: If I can go back to the question that you asked last time about the statewide achievement scores and whether or not they are appropriate, certainly I think they are appropriate for some purposes, but they have to be given appropriate weight in the overall scheme of things. Again, my comments are really limited to that population of kids that have been identified as having learning differences or learning disabilities. One thing that I find that's very difficult for them is transitioning from elementary school to middle school, from middle school to high school, and from high school to the real world. Very often I find that short-term accountability is harmful to long-term goals. By that I mean that when I ask an audience, such as this audience here, what are the most important things they learned during their high school years other than driving and typing, the answers come back under three categories. One is their social skills. They learn how to make friends, they learn how to lead people, etc. Another comes under metacognitive skills. I learned how to figure out what the teacher wanted from me. I learned how to learn in essence and under executive function skills, I learned how to organize my time, set goals, and how to make things happen. Then you ask the audience, "And how many of those things are taught in school?" Their answer is that very few of those, if any, are taught explicitly in school. These are long term goals. Standardized achievement tests that are used to evaluate teacher performance do not evaluate the teacher's ability to be that charismatic adult that Bob Brooks is always talking about who develops these skills that we all recognize are the most important skills in life. I asked this question of an in-service group of teachers and I also talked about this in my talk quite awhile ago. I asked them for a word or a phrase that describes the successful child. They gave fourteen or fifteen answers. The importance of their answers was not what was said, but what was not said. They did not say intelligence or achievement. Not one trait they mentioned that described the successful child could fail to be exhibited by somebody with a 100 I.Q. or couldn't be exhibited by somebody who has a 50 I.Q. These are the things that we should be evaluating teachers on. How are they becoming these charismatic adults in children's lives that we would like them to be? Do achievement tests evaluate that skill in our teachers? That's the important part, so that we can help our children make those transitions that they have such difficulty making.

Giffen: We certainly have an interesting situation in Orleans Parish right now where we're trying to rebuild a school system that is in tatters. Restructuring that school system is the greatest challenge right now. I wonder what sort of advice any of you could offer the Orleans Parish school system from what you know of the situation.

Audience: Audience: Last year the names of the low performing schools were published in the newspaper. Many people were upset with this. But it is all based on test scores. What do you think about pointing out these schools and putting the scrutiny on the schools? Is that an effective way of holding schools accountable?

Fullan: My answer is somewhat double-sided. It's not a very effective way of getting people to change to just expose the weakness without offering a solution. First of all the diagnosis might not be fair, and secondly there's no plan of how you change that. There's no plan attached that has any likelihood of success. Nevertheless, as I said this morning, I think this is the new reality. The out there is in here. It's in your face now. So the move towards the danger notion I think is not to initially spend a lot of energy fighting the publication of results, but to spend some of that energy saying, "How are we going to get our wiggle room? How are we going to carve out that part that we can develop?" You can link into outside forces to do that. So, as a strategy, I don't think it is very good. But at least it's a wake up call. It gets people's attention, and then you go to a more serious strategy after that, something that's more likely to work. For example, we are presently starting a series of reforms in the Edmonton Catholic School District. This is a district of eighty schools. We are using a training system of working with teams from cohorts of twenty schools. We have two cohorts of twenty that we're overlapping training, and then we're allowed the second two cohorts of twenty in year two and three. So you get an example of the entire district looking at what we are doing and how we can get better. There is a tremendous accountability expected inside the schools during this, but there's also a certain degree of support that comes from not only our training and support, but other things we're building into the district. There's quite a lot of what we call pressure and support intermingling in that strategy that tends to get results. So, if I were looking for a straegy for this system, I would want a district-wide strategy that has a school-based development foundation to it.

Henderson: When we use the "T" word, testing, sometimes it's used or understood as being global. We need to look at three different kinds of testing. There's I.Q. testing and that purports to measure how smart you are. There is achievement testing, and that purports to measure how much you've taken in of what has been presented. And then there's diagnostic testing, which shows how you learn. When we talk about testing, we need to say which kind of testing and for what purpose? Let's say, for example, that I am a third grade teacher and I have a small boy who wants to build a space station. He has poor handwriting and lousy spelling, but he also has a great imagination and a gleam in his eye. I would want to know that that child has had the benefits of diagnostic testing for dyslexia, learning disabilities, or whatever you want to say, before I wanted to laminate on top of him some requirement to jump over hurdles in something he doesn't understand. If we want kids to achieve, we have to know who they are and teach to who they are so that they can achieve and be who they are. Some states have that kind of testing mandated in their school systems.

Yesterday and the day before I asked people to sit in small groups and to imagine that they had just moved to a school system that had a system of public school choice where they could pick the school that their child was going to attend. What would they look for? What would be important to them? I thought that the responses that came back from the groups were very telling. The test scores were rarely the first thing mentioned. They mentioned class size, they mentioned the warmth and humanity of the environment, and they talked about the level of quality of the staff. How many have credentials to teach what they're teaching, what is the curriculum, and what are the standards of the classroom? I thought that it was an excellent mark of what would be a healthy relationship between schools and the community they serve that this kind of information would be available. I then asked the groups, "Well now, suppose you went to a school and they said 'We don't give out this information.' What would you do?" And they said, "Next." Then I said, "How many of your schools routinely have this kind of relationship with their families and communities where they're sharing the data on student performance, what the faculty is trying to do, and what the standards are as though they did have to sell themselves to their community?" The room got quiet at that point. The point is that what we need to do in all of our school systems is get this healthy relationship back, that is one of accountability where the truth will set you free. Let's sit down and look at how kids are doing and how they're being assessed. What are the standards and what are they learning? Let's all get on the same page about this so that the whole community understands what it is that the schools are doing and why that's so important to the community. Let's have everybody looking at student work and having input into the standards. In communities that are like that, you'll find healthy communities and good schools.

Giffen: I'm curious to know how you would link up parents, children, schools and community in a tangible sort of way?

Henderson: There are all kinds of ways. One way, of course, is to have schools be open to the community for all kinds of community purposes. There are lots of studies that show that schools that are more open to their community tend to be higher performing schools that have more support from the community. They are places where the whole community can come to learn, to get to know each other, and accomplish all sorts of community purposes together. These are truly public schools and what goes on in them happens in public and is open to public view.

Achilles: It's now ten years, if my math is correct, since we put out a report. I was on a commission Phi Delta Kappa set up to study public confidence in American schools. This was in response to publication of *A Nation at Risk*. We made that set of results available in 1988. What Anne just said was precisely what we found in our national study of people's confidence in public schools. There were twenty items that showed up consistently in our data gathering. The first one was a warm and caring teacher. The second one was communication with the school. The third one was safety. Number seventeen was test scores. For some reason those people who have children in the school particularly are not much concerned about the test scores. They are concerned about safety, about the warmth of the school, and about the school being a place where children can be children. The answer that I would have given to what can you do to connect it was told to us very frequently. That was to have performances. Use dress rehearsal time and bring in people from retirement homes to be in the audience. Develop ways to get people to see children perform. One thing we know from the consistency of the Phi Delta Kappa polls is that the closer the people are to the school, the more likely they are to understand and to like the school. So schools in this community always got a better rating than the schools in the nation, but schools my children attend get a higher rating than schools in this community.

Unfortunately, we have this tremendous pressure from somewhere that the kids have got to run faster and faster and faster. Where are they going? Education deals primarily with effectiveness. The business world wants efficiency. These are in conflict. People who want things done as quickly and cheaply as possible are driving us. It isn't in the mind of a youngster who is growing up to do it efficiently and quickly. They want to putter and they want to play. So we have this tremendous tension. Michael Fullan points out that we should be critical consumers of government policy. I would take some issue with this. I think we have to affect government policy. I'm not willing to sit there and let the government do to me, because you know I am a taxpayer, too, and they are setting policy for me. As a professional I am not willing to sit there and just let them do to me. I think I want to influence the policy part, too. But again, as Mike would say, I am what they call a bound professional. I have to work within the policy structure, so there's a give and take there.

Giffen:

I wonder if there's a sense, though, that people find themselves in a situation where education gets pushed so far back by the politicians that once we do need to make a change, there's no direct route for making that change.

Brooks:

I want to tell you what's changing. In Massachusetts we started publishing test scores on the Internet and in every newspaper by schools, showing which schools have the highest ratings. Realtors are actually telling people who are moving in, "This is the district." So, I will tell you, you can get all you want about parents saying, "We want a warm school." There are a lot of parents who are saying, "Well, wait a second. This school is 20 points less. Let's look at this neighborhood instead." I just want to bring a little reality to bear. The issue of assessment is this. What are we preparing kids for? I remember a boy I worked with who would probably be on the bottom one percent in reading because he had a reading disability. But that kid could pick up the hood of a car when it wasn't working and fix it when he was twelve years old. That kid is a very successful mechanic today. It's very interesting to me to this day that he couldn't do well. I'm bringing this up for a reason. I can read, very slowly, but I can read. My wife always kids me when my car isn't working and I pick up the hood. She always says, "Why are you doing that? You don't know what you're going to do anyway." When I pick up a hammer, she already knows what's going to happen. She always says right away, "Curse now. Get it out of your system." The reason I bring this up is that a lot of success in life has as much to do with emotional intelligence as it does with the so-called basic skills. Are we measuring emotional intelligence and how teachers support that in the classroom? Should that be a major thing? Should it be as important a curriculum, not the hidden curriculum, because it plays as much of a role? If we are just looking at particular achievement test scores, publishing them in the newspaper, I think it is a wake up call. It gets the school to look at it. But if we are also looking at all this research that's coming out about multiple intelligences and we believe in emotional intelligence as major factors for success in life as well as academic achievement, should we look at that as well? Should we assess that, and how do we go about it? When Howard Gardner wrote his book in 1983, he said too many tests are based on two things: mathematical logical skills and verbal skills. We lose many kids who are so gifted in other ways when we just use those measures. Unfortunately, these are the measures that are used in the tests that are printed in the newspapers.

Fullan:

Not only is it important to have both sets of goals, but there's a link between the two. The more the high stakes accountability system emphasizes academic achievement, the greater the gap becomes between those students who are doing well and those who aren't doing well. That's the consequence of that. Now the link is that if you focus, and I'll just use the short terminology of emotional intelligence, if you focus on emotional intelligence, what you do then is deal with the main problem that students aren't doing well have. And that is they're not connected. They don't have a relationship connection. If you get the relationship connection, two things happen. It's a pathway to greater academic achievement because it works on the motivation to want to learn and to be connected. So it has that. It has a double virtue of producing skills that are necessary to succeed in society like teaming, diversity, and empathy. All of those things are what employers say they want, as well, along the way. So those are good and important in their own right for a democratic society, but also as a route to academic achievement. We can work on this together because they're not two separate things that are never connectable.

Giffen:

Dr. Achilles, I want to turn to you for a moment. There was a question that you submitted which said, "How do we reintroduce the idea that kids are the future?" I'm wondering what makes you think that there is a general feeling that kids aren't the future?

Achilles:

Some of that notion comes from my early training. I studied classical languages in college. The Romans had a funny notion that kids were the future. So, whatever they did, they mentored the young people, they took them to the forum, they took them to the senate meetings, or they took the kids around with them. Schooling was an important part of life. In the Latin tradition, you know, a strong mind and a strong body, they balanced the physical activity with the mental activity, and they did that so that they could perpetuate the Roman society. To me, kids are essentially our IRA's. They are our investment. I want them out there doing a good job as I retire. I don't want to have to build a higher and higher wall and worry more and more about what's going on. But I want to make that investment in the kids today so that they have the opportunity to do things that will help make our society better. However, we're putting kids in conflict with the system by putting on them unusually harsh demands that have no basis in any research that we have. It kind of makes me angry when I hear about it.

Just so you'll know, sometimes I testify in court. One of the things I like to have fun with is the closing attorney. They're always fun to pick on. I was testifying in Delaware one day and finally the attorney said, "You've been using the terms pupil and student. Are you using them interchangeably?" Now, he shouldn't have asked that question because I studied Latin for a long time. I said, "No, sir, I am not. A pupil is a ward of the state. And in our society that's up at about age sixteen. We have a certain responsibility until that point. A student, from Latin *studio*, desire to learn, is a person who stays on with us because that person is interested in what we're doing. We have a different kind of responsibility because it's not legal at that point; it's moral. We have an issue when it's a question of legal responsibility or ward of the state. When you're a student you could go someplace else." So I tie all this together and I say it's our future, and we had better look out for it every way we can.

Giffen:

Question over here.

Audience:

I don't think we've had a really good response from the media. What kind of responsibility guides do you think the media has to give us information about the changes in education?

Giffen:

I'll just answer that as briefly as I can. I think in many ways when you get your information it should be from many, many different sources, not just from television, or not just from any one television station either for that matter. I would like you to watch ABC 26, but the fact of the matter is no station, no newspaper, no radio can give you a complete picture. You have to be always reading and watching and listening from as many different sources as you possibly can. One of the biggest problems that we have in covering education stories in a meaningful sort of way is that there is this idea that a new superintendent will be the panacea for changing so many problems within the Orleans Parish school system. It's a very emotional issue, and parents find themselves arguing and providing sound blades to the news, particularly television news. I can't tell you how boring it is as a journalist to cover a school board meeting when the only substance that we can bring up is a parent standing up or being handcuffed and thrown out. The problem is that with television it's very difficult to do what a newspaper can do in that case. In other words, give the who, what, when, where, why to the education side of the story. It's a very, very important topic that television in a regular nightly newscast format can correctly cover to its fullest.

Dickman: I think that as far as media is concerned it has a purpose, but the purpose and issues we are talking about are much too complicated to hear on the evening news. Clearly the administration in Washington has taken the position, for the purpose of creating a sound bite, that we're going to have a thousand-man army to teach reading. Well, what about the training and everything else? That was kind of forgotten. What the media can do very effectively is create a need to know and a desire to change. At that point, we have to rely on, to paraphrase Dr. Achilles, those educators that are lifetime students because the best educators are students and are always students. They must want to learn in order to be able to make the changes that we are talking about. Those people have to be identified. We have to be critical consumers, as Dr. Fullan says. But, I'll use it in another aspect. We have to be critical consumers of what we see and what we hear. Our school districts up in my part of the country publish their budgets. The special education budget is in 16 point bold type, but the budget for the football team is in little 6 point type, off in the corner of the page someplace. Nobody notices that they are actually paying twice as much for football helmets as they are for materials for special education students. So you have to be critical consumers about what you read and what you hear.

Giffen: In order to be a critical consumer you have to be exposed to as many different areas of the subject as you possibly can. You can't depend on television to do that. As you say, it's a complicated topic. It can't be told just in pictures. Our time is becoming very tight, but I think that we have time left for one last question.

Audience: I do not have a final question. But I would like to make a final statement. If I'm reading everything from record, not only in this room but in any of the other sessions, what we have been saying and hearing is that we need to create a community of learning where the school and the parents work very closely together. If everyone feels they have a vested interest in what is taking place, there is a common goal and a shared vision. We really and truly need to move towards creating that community of learning.

CHAPTER NINETEEN

Equity

Moderator

MICHELLE MILLER
CBS Affiliate WWL Eye Witness News Anchor

Panel Members

CHARLES M. ACHILLES, ED.D.
Professor of Educational Leadership
Eastern Michigan University
President,
National Council of Professors of
Educational
Administration

ROBERT BROOKS, PH.D.
Faculty
Harvard Medical School
Former Director
Department of Psychology
McLean Hospital

HONORABLE DAVID ADMIRE
Judge
King County District Court
Redmond, Washington

EDWARD M. HALLOWELL, M.D.
Child and Adolescent Psychiatrist
Director
Hallowell Center for
Cognitive and Emotional Health
Faculty
Harvard Medical School

ROBERT STERNBERG, PH.D.
IBM Professor of
Psychology and Education
Department of Psychology
Yale University

PRISCILLA VAIL, M.A.T.
Learning Specialist
Bedford, New York

Miller:

As long as the children were getting an equal education in terms of the same books and having a teacher in class, it was fine not to integrate. We are faced now with the situation that all of our children are placed together in educational settings. Still, even though this equality exists in name, some would argue that in this city we have the fact that segregation is still in existence. I cover the schools here. Orleans Parish, Jefferson Parish and the other surrounding parishes certainly have interesting stories to tell. But we're going to talk in scope, and so we're going to focus on the situation that is truly important, just as significant as it was back at the turn of the last century. And that topic is equity. The discussion will also focus on how we will define, dictate, and shape education for the new millenium. We have an extraordinary cast of six very talented doctors and educators on our panel: Dr. Ned Hallowell, child and adult psychiatrist and frequent guest on such television shows as "Good Morning, America," "Oprah," and "20-20," and also the author of several best sellers including *Driven to Distraction, Worry,* *and Connect*; Robert Brooks, Ph.D., child and adolescent psychologist in Cambridge, Massachusetts and renowned authority on emotional intelligence, self-worth and resilience; Dr. Charles Achilles, the leading investigator on the largest study in the nation on the effect of class size on learning; Priscilla Vail, 1998 recipient of the International Dyslexia Association's highest award for her contributions nationally and internationally to the cause of identifying and treating individuals with dyslexia; Dr. Robert Sternberg, whose acclaimed international research worldwide through practical, creative and analytical learning activities lead to successful intelligence; and Judge David Admire, whose life skills programs for juvenile offenders in Washington state reduced the recidivism rate from 68% to 29%.

My first, and perhaps most important question I will address to Dr. Hallowell. How is equity defined and how do we teach it to our children?

Hallowell:

A short answer: I don't know and I don't know. This is not to say that it isn't something we must struggle with, but I think everybody hears the term and they sort of intuitively have some idea about what it means. But as we begin to spell it out exactly, that's when the disagreements start coming up. How we teach it to our children? I think it's more a matter of how they teach it to us. It's how we unteach it to them that causes the problems. Having three little kids myself, I feel that they're born with an idea of equity. They're completely aware of differences. I remember Lucy coming home and saying, "Why is this one brown, and this one light brown, and this one dark brown?" She had a class with Asians, Latinos, African Americans, people like us, and I tried to explain to her where all those differences came from and what they meant. She was perfectly descriptive in her mind. And then when we get into invisible differences, like differences in religion and differences in learning style and differences in brains, and it is my belief that we all have different brains, then it gets even more complicated. But I think our children have an innate sense that the difference is good. And it is we grownups who give them the fearful sense that difference is bad. That would be my two cents worth.

Achilles:

In a Supreme Court case it was pointed out that equal treatment of unequals is unequal. And from that I think we then generate the notion of equity. Equity is not equality. But rather, it's a differential distribution of whatever the source might be, so that we can have equal opportunity. When I do my class site research, I point out that if we make classes small for everybody, that's equality. Every youngster gets a small class. That's the same thing. But one of the advantages of small-class treatment is that those youngsters who need small classes most in terms of achievement and school behavior get more from small classes than the youngsters who don't really need small classes. So our research consistently shows that small classes are both a treatment of equality: all youngsters get the same thing, and a treatment of equity, where the youngsters who need help the most can get the most.

Miller: Certainly this problem of equity goes well beyond race, class, and ethnicity?

Brooks: Oh, I think that it definitely does. You can go to a school where it seems very homogenous in some ways, but there are some of the most major discriminations and biased views that you'll ever see. They did a number of studies at the University of Massachusetts in Boston where they found that how a teacher responded to a child, and it could be a very homogenous classroom in the sense of race, had a large impact on how the other students responded to that child. If a teacher called on a child and the child didn't know the answer, and the teacher then immediately went to another child and had that "Where are you, kid?" look, more and more of the other kids started to treat that youngster with a lack of respect. Equity has an impact on everything we do in a classroom. That's why one of the things that I mentioned in my plenary session is the importance on the very first day for teachers to really call attention to how we are all different. We all have different talents, and we all have different skills. I actually have teachers, kindergarten through twelfth grade, actually say to kids, "We're all very different and the most fair way I can treat all of you is by treating you in ways that you will learn best and be most respected." Then I have teachers say, "If at any time during the year you feel I am not being fair, please tell me, because you will never learn from me if you think I'm not being fair to you." Teachers have told me that's one of the most powerful exercises when they do it the first day because you're giving kids permission to actually let a teacher know when the kids feel they're not being fair. That to me gets to the very issue of respect and diversity.

Miller: Dr. Sternberg, how do you incorporate that into the class work and how do you put it all together?

Sternberg: Well, I want to make two comments. In terms of equal opportunity, having the teacher get up and teach a lesson to everyone and have the impression that that would give equality of opportunity is not necessarily the case, because one of the things we've found in our research is that kids learn in different ways. And so you can have a teacher give a lesson and then you can get rid of all tracking and all sectioning and have the illusion that by not having tracking, you're not having sectioning and you're not having grouping that creates equity, but it doesn't. To give you a concrete example, in our own research what we did is we gave the kids an ability test that measured traditional kinds of skills, like memory and analytical skills, which are what ACTs, SATs, I.Q. tests, Iowa tests and the whole bunch measure. But we also had sections that measured creative and practical skills. The first results I thought were really interesting in the sense that if you looked at the score pattern, the kids that did well on the analytical section were your traditional high-scoring kids. They were mostly white, they mostly went to good schools, they mostly came from wealthy families, and they mostly had a lot of opportunities when they were kids and so on. And if all you were to give were the conventional kinds of tests, that would be the end of the story. You'd say all right, those are the smart kids. But if you looked at the kids who were in the high creative group and the high practical group, they were much more diverse economically, ethnically, racially, and educationally in every sense. So now we discover that these very creative kids and very practical kids have a lot of talent, but it's not being recognized. But what's worse is that then if we teach in a way that only values the memory and analytical skills, it's a double-whammy because first you don't recognize it in the tests, so they look stupid. Then they're taught in a way that doesn't value their skills, so that hits them a second time. And then they take a standardized or teacher-made achievement test that only emphasizes memory and analytical skills and now they get hit a third time and now it's a circle. Because you've got high so-called validity, the appearance or the illusion is that you have a valid test because the correlation is high. But that's only because you've created a system where a very narrow set of skills gets you through all three. What we've discovered in our research is that if you teach the kids in a way that at least some of the time matches their pattern of abilities, whether it's memory, analytical, creative, or practical, all of the kids achieve better. The high-creative and high-practical kids can do better in the course work, but only if you teach them in a way that at least part of the time matches their strengths. So that, I think, is equity or equality of opportunity when you teach them in a way that enables them to achieve in the manner they are capable of and doesn't lock them into a closed system. The problem with the closed system is you only know after you get out of school what little good the high test scores are anyway. I mean, it's sort of a little game we play that these skills matter and they matter right until the day you graduate. Then you meet these people at cocktail parties and the last big thing they did was to get high scores on the test.

There's one other thing I want to say, relevant to Dr. Brooks' comment. It concerns a study that was done at the University of Minnesota. It has to do with challenging people, but it's actually very relevant to schools. You tell these guys who are looking for women to go out with that you are going to arrange a phone meeting with someone for them. So half of them are taught that this person, fortunately for them, is just terrific. They see a picture and get a personality description of everything they always wanted. The other group gets the loser. You know, unfortunately she doesn't have the best personality and then the picture, you know, Frankenstein. It's sort of like set up that they're not going to think the person's very desirable. So they make their phone calls and have a conversation. After the conversation's over, they're asked what they thought of the person they talked to and predictably the guys that got the attractive, good personality woman to talk to thought she was really great and the guys that got the not-too-great-one thought she was not so very great. But, as you guessed, it was a random assignment. Whether you were told whether it was this kind of woman or that kind of woman was perfectly arbitrary. So then what happens is that you end up thinking what you were set up to think, just as the studies at school would show. What's even worse, though, is that they have an outside observer listen to the woman's part of the conversation, and then the outside observer rates how attractive they think the woman sounds from the phone conversation and it goes with what the guys were told. So not only did the guys who called the woman think she matches the original description, but if you treat someone in a certain way, they start behaving in the way you expect them to act, so it becomes a self-fulfilling prophecy even from the standpoint of the third person. And that's what can happen in schools.

Miller: Certainly, that seems to rein in the whole issue of special education, and Ms. Vail, if you could respond, you certainly have knowledge of how that stigmatizes children.

Vail: I see hidden unfairness in school after school across the country and I think that it's interesting to know what kids think is important. If you ask a first grader what do you think is the most important quality a person can have, they will say, "to be fair." And if a first grader really wants to give you a kick in the gut, they will say, "You're not fair." That is for sure, but I hear and I see schools talking about how we teach the whole child. We individualize. And then you may see, as I did just two weeks ago, a child, a very bright child, who has a genuine documented word retrieval difficulty. If the words are there right in front of the child, she can talk a very good game. But if she's called on and asked, "Now, what was the name of that leader?" or "Who was the king?" or "What were the tenets of that treaty?" she will say, "Oh, oh, wait a minute. I know. I know." And the teacher will be saying, "If you knew, dear, you could tell us." And she'd say, "Oh, it was on that part of the page and there was this little squiggly writing and then underneath, and that's where they explained." Well, this child, as I say, has a documented word retrieval difficulty. And we've taught her to study by having an index card right beside her textbooks. And as she goes through, reading her textbook, she writes down important names and important proper nouns and so forth. That's her crib sheet, her cheat sheet, and her self-help sheet. So we encourage that, and we've encouraged all kids with learning disabilities to be self-advocates, and to go to the teacher at the beginning of the year and say sometimes I have trouble with ta-da, ta-da, and this is how I try to help myself. Will you go along with me? So, if she went to the teacher and said, because there was a test coming, "May I bring my index card with me into the test? If I'm trying to watch the clock, remember, retrieve, remember, reason and write all at once, it's too much for me, and I forget those names and those words that are all important to me. And so could I please bring my index card into the test with me?" Well, you know, of course, what the teacher says. "It wouldn't be fair." And we encourage the kids to go back with a little secret, behind-the-scenes phone call to the teacher and say, "Why not teach this strategy to every kid and let every kid who wants to bring the index card into the test? What's wrong with that?" Well, that created quite a little bit of consternation on the part of the teacher because she was still sort of wavering on this borderline of "if you're not afraid of dropping into the acid pit, then maybe this is real learning." But she decided to try this strategy, and I think it's going to work. And so many times when a teacher says it wouldn't be fair to the other kids, open it up and say, "Why not let everybody do this?" But we do see on the part of teachers who feel that they're being enlightened and who are well-intentioned people a terrible concern of not providing the accommodation in case they might seem to be unfair to somebody else, and that's really unfair when they're waving the banner of individualizing.

Miller: To get children who have learning differences and ways that they are being taught to overcome them are really strategies that all students can utilize.

Vail: Sure, and some kids will really need that index card. Other ones don't need it at all and remember perfectly well without it. But if all kids are allowed to bring the index card, then that's really individualizing, isn't it?

Miller: Judge Admire, this is a pretty compelling point. I believe that I remember reading that a large majority of these kids with learning differences, perhaps as many as 70%, become juvenile offenders. Is that correct?

Admire: I think that's correct.

Miller: A huge number and a huge problem that perhaps defines some of the problems we see in this city.

Admire: It is also believed that 80% of the adults in prison are learning disabled. The amount of money just being spent through the criminal justice system to deal with these people because they're not dealt with appropriately in the educational system is phenomenal.

Miller: Talk about what you've done and how equity has really been instrumental in the way you see this problem being addressed.

Admire: Well, I have two children who have multiple learning disabilities and attention deficit disorder, and I started seeing in the tenet coming before me the same type of frustration that I saw in my children. One time I asked one gentleman if he had learning disabilities and he said yes. His mother happened to be in court and I asked her to tell me about them, and she started crying. She said, "You're the first one whose ever cared enough to ask about it." So, with the Learning Disabilities Association of Washington, we did a 6-week test and found that 37% of the people pleading guilty or found guilty were diagnosed with learning disabilities. As a result of that, I said, "Well fine, we'll just send them to a program, but we soon discovered there were no programs. So we developed our own 14-week life skills program that teaches anger management, problem solving, and decision-making. We also tell them about their disability, and there is an amazing response when they realize that there is a reason why they have always felt stupid. Giving them the skills to stay out of the criminal justice system has reduced our rate of recidivism by 40%, and that's held true every time we've checked it over nine years. If you want to talk about treating people unequally, go into the judicial system where the hallmark is to be treated equally unto the law, but people are not because the system doesn't know enough about the reasons why individuals are there. It's not a matter of blaming the system. If you don't have a child or you don't have someone you know with these disabilities, there is no reason you should ever be aware of that.

Miller:

It appears that that seems to be the problem in areas where a good number of people have their children. People who have wealth and affluence have their children in private schools. They don't see the significance of public education, because their children aren't involved in the day-to-day ins and outs. They don't see the value of these kinds of measures.

Achilles:

I'll give you an example of the exact opposite: parents with their kids in private schools who would not make accommodations and who were saved by public schools.

I bring this up because for me equity is teaching each child in the way that they will learn best. This means that every one of us has to be very clear about our own prejudices and biases and our own what I call negative scripts that are very entrenched.

I talk a lot about accommodations. I once got a letter from some parents in Princeton, New Jersey. It was one of the most poignant letters I have ever received.They put their child in a private school that was not getting federal funds. The private school could do anything as a private school. They said they just wanted to ask for two accommodations.

They wanted their son to be able to have two sets of books. They would even be willing to pay for one because there was so much pressure for him to remember to bring his books. The second accommodation was that they would like to get his homework on Friday for the whole following week so they could help to organize him so he didn't get as overwhelmed. The school sent a letter back saying they could not do this because if they did, it wouldn't be fair because he might get ahead of the other kids. This was actually in the letter. Personally, I'd give two sets of books to almost every kid. So then they put him in public school.

A while later I remember coming home, and my wife said, "You just got a 16-page fax." I said, "Sixteen pages?" It was from these parents. The first page was a letter saying their son was thriving in public school. The next fifteen pages were his artwork. He is a brilliant artist, and he was going to be published in an art book. And he was only like nine years old. I think they just wanted to say, "See, this is what he can do." I've been to the private school groups and I've been to public schools and all over. I think we have to be very careful. It still boils down to what are our prejudices.

Years ago there was a study done by Robert Rosenthal of Harvard. He went into a school, tested the kids, and told the teachers about one group, "You have a group of budding superstars here." In fact, it was a random list. The kids were no brighter or less bright than anyone else in the class. Anyway, to make a long story short, Rosenthal and his colleagues went to the school throughout the year to observe the teachers and how they differed in terms of whether they thought the kid was a budding superstar or one who was not a budding superstar. At the end of the year, he went back and those who had been identified as the budding superstars tested higher on several tests than those who were not. He then informed the teachers that these kids were no more budding superstars than anyone else. And you know what the teachers said? They said that they had not treated them any differently. But guess what? The budding geniuses received more eye contact and more respect. Furthermore, the superstars were given more time for reflection when asked a question. In addition, if they did not seem to know the answer right away, the material was reviewed again. If it was not a superstar, the teacher quickly passed the question to another student, allowing no time for thought or review.

I bring this up because equity means for us to be honest in our own hearts and souls and say every kid has to be taught the way they will learn best. We have to be aware of our own prejudices.

Miller: Dr. Hallowell?

Hallowell: I just want to underline what David Admire said. I came across his work four years ago when I was in the process of writing my book *Answers to Distraction*, and I was so impressed with it that I put it in that book and everywhere I go I talk about it. Yet, I don't think your program has been replicated, how many times? I mean, how many other states have picked up on it?

Admire: It's in certain areas of California and Texas, but it's actually more in schools than it is in juvenile detention centers.

Hallowell: That to me is just astonishing. I think every judicial system in every state across this country ought to have picked up on it. It has been five years now and the data is so striking. The program is so simple and so inexpensive when you compare it to housing people in prison and building more prisons, which has been the latest fad in terms of crime control. It just amazes me that the politicians haven't picked up on this. This totally grass roots, common sense kind of program has not achieved the widespread audience and acceptance that it should have.

Admire: I should tell you that they adapted this program in the Nappa State Mental Hospital for the criminally insane. Their results have been so striking that they're going to do it statewide in the mental health hospitals, because the inmates actually go through the problem-solving process instead of attacking each other.

Hallowell:

I just think that what you've done is wonderful. But if I may, I would like to extrapolate from that to give you my little nothing in terms of what you can do in a classroom towards equity. I like the phrase, and I use this with kids when I give lectures to them. They catch on even in first grade. I like the idea of a central part of every child's education being every year asking and answering the question "What kind of brain do I have?" When you open that up the kids will spill it all out. If you begin to compile a list of strengths and vulnerabilities, the next thing you know is the kids get over their self-consciousness. They start volunteering: I'm good at ground balls, I'm good at eating spinach, I'm bad at sitting still, I'm good at watching TV, I'm good at Latin, I'm bad at, you know, you can get a very functionally descriptive list of strengths and vulnerabilities that begins to help you understand what the particular learning, feeling apparatus you've got is like. And the next thing you know, you see these so-called categories breaking down and you see people helping one another.

I presented this at a school in Washington not long ago that had a two-tier system, one for so-called learning-disabled kids and the other for so-called non-learning disabled kids. The seventh grade science curriculum made their central question throughout the year, "What kind of brain do I have?" By the end of the year, the kids had voted to do away with the two tiers because they saw there was more overlap than difference. It's amazing to me that we are not asking children and adults alike to talk about their brains in functional terms because that's how our brains exist. What does your brain do easily and what does your brain do with difficulty? That can guide your education, whether you need to work at getting better at peeling potatoes or work at getting better at conjugating Latin verbs. Then, how to manage your brain seems to be a real central life question that all children, and adults for that matter, should begin to take seriously and kind of organize their education around them, because we have enough information now to begin to answer that question intelligently. I think the work of people like Dr. Sternberg and many others, Howard Gardner for example, are really exploding the myth of smart versus stupid and bringing us into the world of what kind of brain do I have instead.

Sternberg:

I just want to make a quick comment. It's about knowing your own prejudices, which is always a good idea. But there's some research that suggests it's really hard to do. One research out of Yale dealt with this subject. What they did was divide the test of unconscious prejudice. Basically the way it works is you have to sort names, and so some of the names might be names that are frequently associated with people of one socially defined race, you know, white, like Betty or whatever, and other names might be associated with Asian people. Other names might be associated with African American people and so on. And they look at the patterns in reaction terms. But the bottom line is that people, especially Anglos, show really marked response time differences in response to the different kinds of names. They are very quick with names of their own race and not so quick with the others, even when you control for their familiarity. And what they've concluded is that the test of unconscious prejudice does not correlate with tests that ask people about their own biases. The only point is that when we ask ourselves about our own prejudices, we usually don't know we have them, and the worst problem sometimes is not the prejudices, it's being sure you don't have them when you do. What they have found is that even people who are just absolutely convinced that they don't have racial prejudice, other kinds of prejudices show really pretty strong effects on this test. I'm only bringing this up to make the point that self-examination is only so useful.

One of the things we found in our own research is that when we evaluate teachers' and students' cognitive styles or thinking styles according to our own theory, teachers, without realizing it, tend to give higher grades to students who match their own styles of thinking. It's not that they say, well you know, I think I'm great and I want other people to be like me. But a fundamental principal in interpersonal attraction research is you are attracted to people like yourself. That not only applies to romantic relationships, it applies in the school. So, one has to be on guard for looking to value other people like yourself. When I started teaching introductory psychology, I had gotten a C in the introductory course, so I figured that I hated that course. I almost left psychology because of that and I wasn't going to teach it the way the teacher taught it to me. I wanted to teach it the right way. So I taught it the right way and I thought, boy, what a great course this is because I've done it right. Years later when I came up with a thinking styles theory, I did exactly the same thing that my teacher had done. I taught it to people like me, and so I thought it was a good course.

Panel: You just brought up an obstacle. Let me ask you this. Do you think it's important for anyone who's teaching kids to have as part of their training a greater awareness built into the curriculum of the prejudices we have, like the research you just cited? And if you do, what would you do as part of teacher training to address the very obstacles you just brought up? The obstacle is we don't understand our own prejudices enough, and yet let me tell you the research shows as long as we have expectations and prejudices it especially impacts the kid. I hear your caution, but I'm much more interested in what we do about it. The results will never have equity. We can't self-examine ourselves because we're prejudiced to begin with, and it becomes very circular.

Sternberg: One thing we can do is use the kind of test of unconscious prejudice, which was put up on the Internet. It's useful just to demonstrate to yourself that prejudices you didn't think you have, you do have, because step number one is you have to recognize you have a problem. If you don't recognize you have a problem, all the instruction becomes a waste of time because you think it's about other people. It's not a problem I have. So, number one is to recognize that whatever you may think about yourself, it's probably a problem that you need to recognize in yourself. Number two is to try to show the strengths other people bring to situations that you may not have looked at as strengths. One of the things that has bothered me about some of the education of children with learning disabilities is that it tends to focus on weaknesses rather than on strengths. Of course, you have to help the kids remediate and compensate for the weaknesses. That's not even in question. But the other side, as was mentioned, is to realize that every group has strengths, too. Every individual has strengths. So a second thing is to realize the strengths that people who have different kinds of backgrounds can bring to bear that you might not have.

Admire: Talking about prejudices, in the court system we see it every day when you pick a jury. Do they have prejudices or not? Everybody will tell you no. But the most effective lawyer I've ever seen do this says we all have prejudices and it's okay as long as you know you can be fair even with that prejudice. It was amazing the different responses because people came forward and said, "Yeah, I really don't like that." Then the next question is, understanding that, can you put it aside?

Sternberg: We did a study with African kids in Kenya who tend to do very poorly on Western tests, and the test we gave them was a test of their knowledge of natural herbal medicines that are used to fight parasitic infections, which almost all of them have. This is extremely practical knowledge, and to do well on their tests is invaluable in that kind of environment. But the teachers thought the kids generally were not very bright and that they were losers. Well, we found that there was a negative correlation between scores on that test and their grades in school, as well as on Westernized I.Q. tests. In other words, the more knowledge they had, the more effective they were in coping with their everyday environment, the worse their school grades were. The dumber the teachers thought they were, the worse their scores were on Western I.Q. tests. So, getting back to some of the issues discussed here, kids can develop skills that are really adaptive strengths for the environment they live in. They go into the school and they become dumb. That's why I say it's useful to understand the strengths that other groups bring to their situations because none of our kids would know about these natural herbal medicines or about many of the effective adaptive skills these kids have.

Miller: It sounds like all of you are talking about taking ownership of not only our own prejudices, but also the prejudices that we are dealing with in the classroom and in our day-to-day lives. Am I correct in that assumption?

Panel: A lot of the ways that American education lets kids down is they don't honor the full-skill set. They just go for a particularly, narrowly defined skill set.

Miller: Are there any questions from the audience?

Audience:

We know that there's no real equity. There's no real equal opportunity. How do we ever get it?

Panel:

I guess I was the one who tried to make the distinction between equality and equity in the discussion. As a person who works with school administrators, we're concerned about this question consistently. For example, if I want to assure all children equal opportunity, those children should be assigned to teachers at random. In that way each child has the opportunity to get the best teacher in my school system. Any other way that I assign those children is to interject into that assignment some assignment bias.

How do we assign teachers to the inner city schools? If you turn it around the other way, how do you assign the children? It doesn't make a lot of difference to me which way you look at it. We assign our teachers often based on seniority. The teacher has a choice where he goes because he has been teaching a longer amount of time. Or we base it on some other issue. If we want really, truly to get the question of equity addressed, we have to bring it up in a serious discussion of what we do in the bigger piece of schooling. That is, how do we assign kids? It gets very political, and as I'm sure you know, it gets very personal and very hot over that question. Why would you assign bright children to be with not-so-bright children when it's a penalty for the bright child? We know better, but try to tell the parents.

Audience:

A lot of the concepts that you are talking about certainly are grand and novel, and perhaps they would work if applied. But, how do you get the parents, the politicians, and the administrators to think like you?

Panel:

If we expect to have a public education system, we have to go back to the roots of that which is essentially a Jeffersonian concept. If the nation wishes to be ignorant and afraid, which is what never was and never can be, we need to educate every generation as well as we can to get done whatever it is the goals of the society might be. When we get into this kind of discussion, we now find that we have political ideologies, strong ones, arguing that we ought to have vouchers and the like because that makes it more equitable. Well, these debates get very hot and very political and depending on your position you can go one direction or the other. The best paradox of that I saw recently was in *Education Week* where an author points out that this is the first time he knows where we're using public money to bribe youngsters away from public schools. If you put it that way, it becomes a very interesting discussion. These are difficult, difficult questions that are being addressed here. Whether you deal with those at the individual level, taking on my understanding of prejudice; whether we're talking about the school system as a prejudiced entity, and that's some of what you're talking about; or whether we're talking about the school systems' responsibility as a leveler of society. Understand that if we teach each individual to that individual's levels of wherever they can go, what we're doing is we're expanding the discrepancies in our society, not narrowing them. Once I teach a person to read, I can't keep that person from going somewhere. So we're caught in an interesting paradox, a very interesting one.

Audience: Would you comment about the tendency for schools to lower standards, especially in low socioeconomic areas?

Panel: All of us want high standards. You know, I don't know anyone who says, boy, it's time to go for low standards, I mean, enough of the high standards movement. Let's really get these kids down to an easy level. But, here's the paradox. There's always enormous pressure from the publishers and from the schools I work with to lower the level. So on the one hand there's nowhere I go where I don't hear from the school people that they want higher standards. But then you look at the books that they adopt and they're always going for the book that is just a little bit easier, a little bit less of a challenge, and when the book is too challenging, they say this is too hard for my kids. So I think that one of the things that we have to do is talk about higher standards and then fulfill it for ourselves and show that we really mean it.

Sternberg: Number one is having the will. The school district doesn't just talk about it in the abstract. When they have the choice they can do it. I can just make one other comment. It's about a research study we did that I thought was kind of interesting. It concerns one of the complaints that I get from teachers as well. The truth of the matter is that most of the tests we give our kids are testing memory. So what I have to do is teach the kids from memory, and it's too bad if they're not very good at memorizing material, but that's what they're going to be tested on. We did a study in Raleigh, North Carolina, in one of the most economically depressed areas of Raleigh. We also did it in Baltimore, Maryland, and in Fresno, California. We either taught the kids the conventional way, which is emphasizing memory, or we taught them for critical thinking, or we taught them for creative, practical and analytical thinking. The results were kind of interesting and they were the same at the third grade level as they were at the eighth grade level. The kids who were taught analytically, creatively and practically outperformed the kids who were taught in the conventional way and/or taught at the memory level only. Well, you say, what's the big deal? The big deal is they even outperformed those kids on memory tests. So again, it's a paradox because a lot of teachers say look, unless you teach from memory, the kids won't be able to do memory tests. What we found is that the kids who were taught from memory actually performed worse on memory tests than the kids who were taught analytically or the kids who were taught triarchicly. When you teach to the kid's strength you are giving every kid, or almost every kid a chance to learn in a way that fits the kid's patterns of learning. So one thing we can do is what we say we're going to do. The other thing we can do, if we really teach to the kid's strengths, which mean practical and creative as well as the conventional way, is we can raise achievement.

Miller: There are some very innovative things that are going on in this community. But you have a situation where most people have lost faith in the system. Is that fair to say? People have lost faith in the system that is failing the children. The parents are stuck in a situation where they want to contribute to public education but feel that their children will suffer because there isn't a progressive enough movement here to change it. Am I right about this?

Panel: It seems as though everyone has lost faith in the system. You know what I'd like to do? I'd like to find those schools where parents have not lost faith in the system because I want to find out what the heck is going on in that school. Do they have more money than any other school? What have they done? Some schools seem to have success, so we learn from those. In one sense you have to really think globally, but really act locally. Whenever I go into a school that says we don't get enough of this and this and this, I am totally amazed by how the students achieve. There's no dumbing down because they had people who said the following, and this comes straight from Stephen Covey. Effective people do not focus on what they have absolutely no control over. At the present time, this is what you have. You focus on that. I guess what I'm feeling is I always like to say what I have control over. If I can save one kid in the next month I will think I'm successful. If I can consult at one school where they make one change, I will be successful. I think we have to be very realistic in what we can do. Look at the schools that are really doing well and ask yourself why they are doing well. This is no blame game. It's not that this is bad or this is good. I think you'll find certain ingredients in the schools that are doing well. Often it starts right at the top. I just want to say that because I think that there are solutions.

Miller: I don't mean to brag about Channel 4, but every week our station goes into a different school and highlights what the positive things are. We did one just last week where the school was inclusive of all students. What I am saying is that even here there are positive stories to focus on.

Achilles: Depending on what side of the bed I get out of in the morning I either defend public schools or growl at them. Because of the comment made down here I want now to get on the positive side for a minute. I don't mean all media, because I don't watch Channel 4. The schools are easy targets. You heard me talk about this yesterday. They're easy to bash. Educators are not vocal people and we roll over and we take all of this stuff. There's a lot of information out there that says American schools are doing far better than the media will have us believe. A well-known economist from Princeton recently went back and reanalyzed the data that some of our doomsday people have said points to failing schools and found errors in their analysis. In fact, American schools continue to turn out better-educated people on the average than any other schools in the world. In 1950, 50% of the people in schools dropped out. The National Center for Educational Statistics points out that now, in 1999, 87% of our youngsters are either in school or finishing with a G.E.D. Now, you hear how bad the dropout rate is. It has never been lower than right now. The big problem we have is that those kids who used to drop out are where? They are in school. Now, schools have not done as good a job as they can do adjusting to those youngsters, and for that we must take our blame. But we don't blame ourselves, as the media does for the huge dropout rate. It has never been smaller. Don't blame us for things, but give us credit where credit is due. I hear so much about our bad test scores. Well, let me tell you something. 35% of those who are now in school who didn't used to be in school are now taking the tests. But you know, we've never normed the tests downward. We've brought that 35% up to the level of the former 50%. But we get knocked every time we turn around. Every once in a while, as educators, we've got to take a little bit of a stand about how good we are. We'll take all the bad, too, if we have to. But there is a good side and you folks out there have got to recognize that. Look at the numbers. Look at what we're doing. Look at what we're doing with very difficult populations and making many of those people very productive citizens.

Panel:

I certainly don't know about the specific problems that you are having here, but in Seattle the public schools were having all sorts of problems. Part of the resolution of the problem came from the most unexpected place when they hired as their superintendent of schools a retired general with no experience in the field of education. He came in and brought a breath of fresh air into this district. He brought the teachers, the administrators and the parents together and offered a different point of view. Just as in Seattle, that leadership at the top can change an entire district.

Hallowell:

We all have our little hobbyhorses, but I think it all comes back to connection. It all comes back to people first of all meeting face to face, making the connection in the moment, and then getting to the problematic aspects. Once you trust one another, once you've stripped away "he stands for this, she stands for that, he's black, she's yellow, he's green," and you've gotten to know each other, you can actually begin to make plans together. I think as long as we remain disconnected we'll factionalize, we'll polarize, we'll stereotype, we'll pigeonhole, and we won't make progress.

Panel:

I think one of the points I'm making is that we are really very much on your side. I really mean it. One of the points I'm making is this. You have to try to get all the parents involved.There are some schools out there now where they seem to have everything, but as hard as they may try they do not get as much parental involvement for whatever reason as other schools. What I would say is you still have to strive, but how can you still have effective education even if in one school you have 100% of the parents involved and in other schools 50% and in other schools 25%? I think many of us hit our heads against the wall. We spend 95% of our energy trying to do something that is not going to work. I have worked in inner city Boston for three years, and I went into one high school to speak. They told me don't even park in the parking lot because there have been two murders outside. You know what? I would say this. There's very little parental involvement at this wonderful high school in Boston. I walked in there, metal detectors and everything, but the moment I went passed the metal detectors the amount of learning and the excitement in that school I would have taken to any school in this country. The point I want to make is that when I sat down with the principal he said that they tried to get as much parental involvement as possible and they tried to get police protection. But the bottom line is they had to look at themselves and say, "This is what we have right now. What can we do with it?" And that was the only point. What were they doing? I'll tell you some of the things they were doing. That principal knew everything in that school. Kids didn't come to the principal; the principal went to the kids. Almost every kid in the school had a responsibility. Even the kid handling the metal detector felt like he could have had the greatest job in the world. Older kids were tutoring younger kids and helping them. The principal said if you spend too much time on things you have no control over, then you're going to have no energy left to reach these kids.

Let me mention one more example. A principal in a high school in Los Angeles wrote a wonderful article about his school. He wrote it was wracked with violence. They couldn't hire more staff, so all they did was break up this high school into smaller units so there were four teachers for every hundred kids. Now this is what was most fascinating, though. They developed a new problem. In the past, they always worked under the assumption that at least a third of the kids were going to be truant. Once they broke up into small groups, the attendance went up to 90%. They didn't have enough room for all the students. They said the school was bursting at the seams, but that was a better kind of problem to have because they could deal with that. No new staff, no new books, but again, I get to this point about connectedness. The kids felt they had someone there at the school to connect with. I bring this up in terms of what one can do, given even limited resources.

Audience: How do you level the playing field, especially for African American children? Also, how do you go about remediating reading skills to bring children up to their greatest levels? I would still like to know how we can level the playing field when you have a child who probably has an I.Q. of 140, but has never been tested, and does not have reading skills to support his ability.

Achilleo: I constantly want to give one answer, and I don't want to sound like that's the only answer I can give. However, if you'll get those youngsters in small enough groups so the teachers can learn about the youngsters, know the youngsters, identify the youngsters' problems, and work with those youngsters, you'll make some progress along these lines. It's inconceivable to me that we can expect the teacher, especially in kindergarten and first grade when the youngsters first come into school, to work with what I call a mob scene and find out what it is the youngster needs early enough in order to make the difference. Bob Brooks was talking about seeing good schools. I spend a good deal of time in good schools because I like them. In a school in California where I do a lot of visitations, any student who is not at grade level is considered handicapped and immediately gets all of the services a child who would be otherwise handicapped would get. So that means that if a child is at or below grade level, that child gets tutoring, gets the IEP, gets the parents involved, and all the supports necessary. The level of functioning at that school is very high because grade level is what determines "handicapped" or not. Then the system brings to bear on all of those youngsters all of the resources necessary, whether it is tutoring or whatever is needed for that youngster to get to "grade level or better."

If you go out to the business world, all the business leaders are going to tell us how to run our schools. In their own businesses, these business leaders use the standard control of about 1 to 7 or 1 to 8. Remember that. That's how they do their business. Those people presumably can read, write, feed themselves, and go to the bathroom alone. But the kindergarten teacher is expected to reach success with a 1 to 30 teacher-student ratio. It makes no sense at all. The hypocrisy of business bothers me. They want to tell us how to run our schools. I'd be very happy to run my school on a 1 to 7 plan, just like they do. I'd be very happy to do that and would get great results.

Miller: I'm sorry; we're going to have to wrap it up because we've gone over on our time. I want to thank all of our panelists. Hopefully, we'll take the positive things that we have heard here and move ahead with them.

CHAPTER TWENTY

Solutions to the Reading Crisis

Moderator

PRISCILLA VAIL, M.A.T.
Learning Specialist
Bedford, New York

Panel Members

KATHARINE BUTLER, PH.D.
Research Professor and Director
Center for Language Research
Syracuse University
Director
Center for Educational
Research on Dyslexia
San Jose State University

REID LYON, PH.D.
Director of Research
Programs in Learning Disabilities
Language Disorders and
Disorders of Attention
National Institute for
Child and Human Development
National Institutes of Health
Bethesda, Maryland

Vail: We're so, so pleased to have you here and we were talking a minute ago that we all have been thinking it would be a good way to begin for you to tell us what was it about the title "Solutions to the Reading Crisis" that brought you to this session. What do you think is the burning issue?

Audience: What's the rush?

Vail: What's the rush? Okay. I'm inferring that you are a preschool or kindergarten teacher.

Audience: Kindergarten.

Vail: Kindergarten. Oh, that's a great question. Why don't we start with that one, Dr. Lyon?

Lyon: I'd like to combine your question "What's the rush?" with all of the questions that ask how you help kids in the first grade, second grade, third grade, high school and so forth. Sometimes there probably doesn't need to be a rush, but there does need to be some groundwork, some foundation laid in kindergarten for kids who are going to be at risk. Phoneme awareness and phonics are so frequently confused. The bottom line is you can teach phonics all day long in any way you want to, but it's not going to take if the youngsters can't pull out from the speech stream these very abstract sounds, like what's a "ba" for instance. Now, I'm not sure why you haven't heard about that. It goes to how we've talked about reading for decades, and that you fit in this bin or that bin, in the bins of phonics or whole language. That's the way people have communicated. They haven't stepped back and said, "What does it take to learn how to read?" Clearly it takes phonics because we have an alphabetic language. Do you know what I mean by that? You know, it's a relatively predictable language that allows us to learn some things and then unlock most words we don't know. But to do that, you've got to lay sound on top of the graphics, the printed stuff. Phoneme awareness has been around a long time. It was initially looked at in Russia in the Soviet Union, forty or fifty years ago. In this country, Isabel Leiberman and her group at Yale developed most of what we know. So we've known about it a long time. We write poorly about it. Generally those who do the research write for other researchers and it doesn't help you guys much. Colleges of education have been somewhat slow to look at what it takes to read. They have tended to look at Method A versus Method B and so forth.

Vail: Isn't that just exactly what you wanted? I think that so much energy has been foolishly expended in the either/or and those of us who have been in real live classrooms know that it's so easy to present both the structure of language and the texture of language. They're not mutually exclusive. They're mutually supportive. So, Katie, do you have anything you'd like to add to this discussion?

Butler: Well, I do know that there are some speech therapists in the group. I saw them an hour ago. I want you to know that while Isabel Leiberman and her students, including Bonita Blackman, have done marvelous things, actually speech therapists were there earlier, only we didn't know what we were doing in some ways. Because we learned different terms for it, we called it articulation therapy speech sounds. We were doing auditory discrimination, which has a different meaning, or did have a different meaning than this. We did things like sound blending and analytical and, you know, mostly for those of us who worked in the schools, the children responded pretty well. We did it all auditorally. I sent the groups back to the first grade teachers and the kindergarten teachers and the second grade teachers. I always wondered why they loved me. I knew I was lovable, but I didn't realize that what they saw, I guess, was these children came back and they responded to the auditory challenges of reading because I had not tied it in with the visual, had not tied it in with the letters. Nor did my training lead me to think that I should do that. Obviously I should have. I hope that many people will hear about phonological awareness and that training programs in communication sciences and disorders, used to be called speech and hearing, will also recognize a role in phonological awareness because it ties in very neatly with the exception of not recognizing its emerging importance in literacy.

CHAPTER TWENTY

Audience: My son's in the fifth grade. He still doesn't know the sound of "ch". What do I do?

Lyon: There are a couple of instructional approaches under study. One is Bonita Blackman's that was just mentioned. Her program becomes more intense or provides more intense examples and instruction to make those particular distinctions. At our site in Florida, our people are working with ways to represent these different sounds. It's a creative thing that they've done. The kids have to have phoneme awareness, though, which gets back to the young lady's question over here: "Why have I just heard about phonics and not phoneme awareness?" What the Florida group has done is devise a system where kids link different kinds of letter symbols with their appropriate sound through the use of color. Now to try to get to the issue a number of you brought up about the kids as they get older. The first response is it's pay now or pay later, meaning you never can circumvent in reading capability any of these things we're talking about. Just because somebody's sixteen doesn't mean that they don't need each of these components. They have to have them. So the job then becomes how to show the kids these things. How do you make these concepts clear and not make them feel stupid? How do you teach them in that kind of environment so that they don't feel like dummies and all of that kind of stuff? We don't endorse programs at the NIH. There's a couple that I've certainly heard of and worked with in my own clinical experience. Jane Green's language and Priscilla's work are two of them. There are quite a few of these being developed for older kids. But they haven't gone through clinical trials that I know of. But what do you do when they are three and four? There are ways to intensify this particular process. Now to try to figure out if it can be done with the older kids. Joe Torgeson has been working with eleven and twelve year old below tenth percentile readers and finds that he can move them quite well. But what took thirty minutes in the first grade per day now takes two hours, one-on-one, per day.

Vail: I just love the fact that you are saying that you can't circumvent these things. Just because somebody's sneakers are this long, doesn't mean that they don't need to know this information, and it needs to start with little preschoolers with word games and word play and taking words apart and making new words. One of Isabel's protégés does a wonderful thing with her little kindergarten groups. She invites some of them to bring their stuffed animals in and sit around in a circle and introduce them. The day I was there one kid had an elephant and another kid had a stuffed hippopotamus. She said, "Okay, now, we're going to fill the room with brand new animals, and we're going to take half of the word elephant and half of the word hippopotamus and put it together and make a new word. So we're going to have a hippophant and we're going to have an elepotamus. In what way are they the same and in what way are they different?" So there was compare and contrast in the use of language. She went on to ask, "Would they like each other if they met?" We need to start with the littlest, littlest children, singing, rhyming, talking, listening to them, and keep reinforcing the contagion of language, and then start putting in the structural aspects. Then we need to continue to teach the structure and the texture all the way through. We can't have fifth grade teachers who are saying, "I don't teach reading. That's not my job." Well, some teachers have been taught that they don't need to teach reading at fifth grade and that is baloney and it's abdication, and it's a form of child abuse.

Butler: This is going to sound wild. But speaking of Isabel Leiberman, I remember when someone asked her what to do with illiterate adults. And her answer was exactly what's been said here. You have to have this foundation and there's no way around it. So you get different techniques for working with adults than you do with children, but it has to be learned, and it's not abuse to teach it.

Vail: Right, and direct instruction is not abusive. There has been some set of weird syllogism that everything needs to be by the discovery method. The discovery method is great, but it takes a while. Direct instruction is not abusive and it does not stifle creativity, it supports it.

Lyon: Writing is a wonderful way to represent those internal sounds that the ear doesn't hear.

Vail: I think that every one of us shouldn't put words in anybody else's mouth, but I think that we all believe in the knitting together and the using of the visual system and the auditory system, and this system for bringing in concepts, necessary concepts. If you ask teachers what is the one thing you would like to have or what's your biggest complaint, they say time. Give me more time. I don't have enough time for anything. Well, to teach phonics and then teach handwriting and then teach spelling and then teach reading and then teach language is an enormous frittering of precious time, which can be much better used in knitting those things together.

Lyon: And I think another point that you're getting to is you're fragmenting a cohesive process. There are going to be times where something has to give, because anybody that's having a tough time at something probably needs practice on components. If you've ever taught anyone piano or an athletic skill, you know you have some choices. You can have the individual watch experts do all of that kind of stuff and intuit and observe and then practice those kind of things. But if someone's having a tough time shooting a foul shot, you probably will work on a particular piece of that. So, it's not the death knell to fragment at times, but clearly it all has to be woven together.

Butler: To follow along with what he's saying, those of you in speech pathology and maybe some of you who read the literature there as well, know that one of the experts in the field has been working on a model of phonological processing and phonological awareness and has come to the conclusion, it was not by any means agreed upon by everyone, that for very young children, her work has been largely with two and three and four-year-olds, that with very young children you need to separate out the teaching of form and the teaching of meaning. In this case it means teaching sounds and not necessarily the written symbol, but teaching sounds early on, because you need that as an underpinning for doing anything with meaning. She calls it a two-step process, which she's using now. Remember, these are language impaired children. You overload them if you try and mingle it all at once. For those engaged in early intervention with language-impaired children, that might be helpful. Again, you can't escape; you have to do both. Now, she didn't start out matching the letters and the sounds. She did a lot of teaching of the sounds first, and then she moved to the next step.

Lyon: The support for that comes from a number of disciplines that study how people handle information and the amount of it. So, rather than go down that road, everybody could just remember a particular course that they were taking where the concepts were coming at you quickly and too rapidly and you were overwhelmed by it. People will talk to you about algebra being a culprit and the need to untangle some of those things in order to actually know what was going on and when to use the concepts and so forth.

Vail: Am I right in thinking that for a while speech pathologists were told no, no, you must stay away from the reading and reading people were told no, no, that's not for you?

Butler: That's still going on.

Vail: That's a ridiculous artificial separation. Right? That's a grown up problem. We need to break and melt down some of those barriers and swap information a little bit for the benefit of kids. Right? Down with turf.

Lyon: Fast ForWord's going through clinical trials now. Fast ForWord is a program developed by Paula Tallal and her group. It's based on a theoretical idea that the difficulties in pulling sounds apart in words actually is because of something much lower in the auditory system. The job of the teaching program based on that theory is to present kids with linguistic information that is spread out a little bit so kids have an opportunity to understand what's in that acoustic kind of verbal. I won't comment on the early data coming in, but what's been a bit difficult with Fast ForWord is that the claims that have been made come from studies that have mixed children together. Some of them with language difficulties of this type versus language difficulties of this type versus reading difficulties, and you can't do that to really sort these things out because you know different programs are going to be more beneficial for certain kids.

Vail: I'd like to make a comment because I'm not bound by the kind of stricture that Reid is bound by. I have tremendous respect for Paula Tallal, and I think she has a wonderful idea. I'm always leery of programs that guarantee thinner size in thirty days to wear one-size-fits-all bathing suits. When I hear that, it just automatically raises my index of suspicion. And so, I think that some of the claims that have been made on behalf of, not necessarily by, Fast ForWord, but on behalf of Fast ForWord are implying that this is the one cure for everything. If there were one cure that would fix all reading problems, we wouldn't be here because it would have been found.

Audience: How do you help kids learn to sound out words, especially if they are long?

Vail: I'd love to take a crack at that. Teach kids from third grade up to read with their thumbs; they love it. When they come to a long word, they use one thumb to cover up a familiar ending, like *ing, ed, ance, tion,* and so forth. Cover it up with that thumb. And with this thumb cover up any prefix that is familiar. Then look and see what's left in the middle. That's almost always a very manageable chunk. As we work with kids in automatic recognition of prefixes, suffixes and roots, we are not only improving their comprehension subliminally, but we are making them make words much more manageable, and the other thing that we can do that they eat with a spoon is to fool around with nonsense syllables. Keep mugs or paper bags, some kinds of containers, in our classrooms. Get the kids to make syllables (open syllables, closed syllables, nonsense syllables, all kinds of syllables) and put them in the containers, one type per container. Then ask them if they can pick two syllables and then put them together and make a word. If your friend picks two syllables and puts them together to make a word, can you say that word, and so forth. Work up from two nonsense syllables to three, to four, to five. If they have that kind of training and they practice reading with their thumbs and they're familiar with roots and affixes, they won't be stumped by big, long, unfamiliar words. We've given them the strategies and they will have the recognition and the experience of manipulation inside that gives them the courage, the zest to get that word.

Audience: They aren't afraid that they will make mistakes and look silly?

Vail: No.

Lyon: The question really is a teachable moment because inherent in the question is how much do I use cueing systems? It has been in vogue over the last several years that if you're reading along and you come to an unknown word, use all of the cues you can. Use the context, the semantics, and syntax, use the picture cues and so forth. We've studied that fairly aggressively because it's so important. What does the kid spend his time on? As I showed you this morning, the good reader will always sound it out, albeit probably quickly. The strategy you need to teach is exactly what Priscilla just said. Anytime you're teaching the kid to go back and find things, even though in the immediate circumstance of reading with a child, that seems like it has more continuity to it. The wonderful thing and the sad thing about following children is they get kind of hung up on these contextual "cuey" kinds of things and it ultimately slows them down much more. The job of the reader is to decipher text. Most words are clearly decipherable. Very few words, relatively speaking, can be predicted by text. You know the one thing people don't understand when you're working with little ones is you can create sentence structure so it is highly predictable. But once you get into real reading, they're not. You can't go down these philosophical argument lines. The job is to teach kids to get to the words and do it quickly. What Priscilla's talking about is not only strategies to unlock these bigger words or unknown words, but also learning the structure of the language: prefixes, suffixes, and roots. All of that kind of wonderful stuff increases vocabulary and increases strategy. What we have to do is try to help teachers learn all of these kinds of things that are really interesting to learn that maybe you didn't get in your training.

Butler: Being an old teacher of the deaf, I know that some of the younger teachers of the deaf do a lot of tactile stuff. If you want to show the length of something, you want to prolong a sound, or bring two sounds together, they do it on the arm of the child. If they want syllables, they tap the syllables. Don't forget there are other ways besides, and there's nothing particularly childish about tapping your arm. But there are other ways of getting the information across. Now I yield to the reading experts.

Vail: No, no, no, no. Thank you very much for saying that, and I love that example. In the short film clip that we saw, the teacher was explaining "di" and "graph" and what that word means. This is so important for kids to have an understanding of how words are built, as well as how to decode them. As far as teaching high school kids and adults, I actually started out teaching adults, but we were alone together and so it wasn't shameful. I think that high school kids are reachable through humor when they are not reachable through other things. The nonsense syllables again can work for them and with them. I also think that with high school kids, even though they are rebelling against rules, the strength of their rebellion is an indicator of their fascination with rules. If I really fight against this rule and it breaks, then it's no good. But I'm going to see if maybe it is good. And for this reason, I see high school kids fascinated by affixes and by roots, and by making new words and by inventing new words. I saw a brilliant eleventh grade class. It was an English literature class, and the teacher was introducing some of the components of Latin. He had five roots, five prefixes, and five suffixes. He had a dictionary at each kid's desk. The job of the kids was to come in, sit, put their hands on the dictionary, take a piece of paper, look up at the three columns, and choose one from each column to make a word that is not an existing word, and to verify its non-existence by looking it up in the dictionary. Once they had built this word, then because they knew the meaning of the root and the meaning of the affixes, they had to decide what the word meant. This was a magnificent way of getting this with boys, extremely competitive boys, and they just didn't want to stop. So I think that we can reach them through humor and we also need to realize, as Reid has said, and as Kay has said, you can't escape the need for the fundamentals, and the instruction has to be a carefully sequenced spiral. If somebody's up here and also down here, we've got to go back to the beginning and be sure they've got all the beginning pieces.

Lyon: You know, that's a great answer, and it ties in with the accommodation versus remediation question. It is going to take a while longer to move kids to good, fluent reading the older they get. We have enough experience with it to see that it can be done if we do it well and do it intensively. There's got to be a way to get information to kids contentwise through other medium besides print if they're not getting it in quickly enough. But I wouldn't give up. Now one thing I think that will help is good, strong teaching at the upper grades in literacy and reading different kinds of things. We're also working very hard on computerbased formats for this. Some of these are getting pretty good. It allows the kid, in privacy, to have an interactive time with something where they don't feel stupid. I think in five years you're going to see some very well researched and conceptually grounded tools to help kids do a ot of this and get the practice they need in their own privacy. But, you know, again it's not an either/or. Here you are with a fifteen-year-old, who you're not lucky enough to have Priscilla Vail at the school, is not getting any content in via print. They're too slow, they're too labored with it, or they just don't care anymore. So we've got to get that information to them. Obviously, talking books and all of that kind of stuff helps somewhat. So there's no quick answer on that one.

Audience: I'm not aware of any of these programs. Could you name some?

Lyon: Most of them are in the prototype stage. So I don't know of any source that will really give you a highly evaluated list of programs. There are a lot of them out there, but I'm not sure how good a lot of them are.

Vail: Most of those programs are written by computer programmers and not by teachers. I saw one the other day that I really thought was out of *Saturday Night Live*. It was purporting to teach the short sound of the vowel "e". The directions were quite complex about what the child had to do. Finally, with great fanfare, the program introduced a sentence. You might care to write down this sentence. It's true. The sentence was this for the short sound of "e". "The elephant ate the green apple." How many sounds of "e" do you hear in that sentence? The elephant ate the green apple. And this was from a well-reviewed program.

Lyon: Or they use "egg" as the key word. Speech and language people tell you that's not a good one either.

Audience: What about textbooks?

Lyon: I've had to learn how the textbook industry works. It's really a fascinating thing. They get these college of ed professors to sign off on these different texts, to put their names on them, and they have folks at these shops that just put all kinds of thing in there. There's not sometimes rhyme or reason how all of this gets in. It's certainly not vested with respect to quality of the information or quality of the representation. So, you know, the Congress is looking, unfortunately, at ways to regulate the text industry primarily because it hasn't done a good job. I would hope that probably doesn't occur. But just like pharmaceuticals, you've got to worry about stuff that's sold that purports to do something that actually it doesn't do. In fact, it gives you wrong examples.

Butler: That's not my area of expertise, but I do know there's a Dr. Ellen Weaver who is a biologist from San Jose State. She and a colleague, who is a critic of the textbook publishers, have been interested in sending textbooks in areas like yours to knowledgeable people and asking for reviews. Then they have been publishing a newsletter that comes out and is presumably done by experts. What they're finding is that in history and in biology, and you name it, there are not only misrepresentations, often there are errors of fact in many of these books, aside from the fact that the reading level is far too difficult. I will tell you she's having problems getting it published because no one wants to fund this exercise, but the things she's told me are just amazing, in terms of what you probably already know. We all grow up thinking that what is in books has to be right. Not so at all. So, just because they are published by a reputable publisher doesn't always mean that the information is correct.

Vail: Something we as adults reserve for ourselves is the awareness of the distinction between and among three different kinds of reading: accuracy reading, scan reading, and pleasure reading. Sometimes they overlap. But we forget to tell kids that there are these three different kinds and that each one requires a different technique, and we pay a great deal of attention, appropriately, to accuracy in the early years. You need accuracy reading if you're going to deal with the Internal Revenue Service or the Bureau of Motor Vehicles or your bank. They don't want to know that you, for example, got a raise. They want a deposit. But if you want to register your car, you don't want to tell them that it's the blue that goes with your eyes. They need numbers and facts. So that kind of reading is agonizingly slow, picky, and tedious. You've got to gear up for it and just do it. But if you tried to read *Gone With The Wind* that way, you'd never finish. So we need to teach kids that there are these three and many other kinds as well. But let's say there are three, and when you approach a piece of reading, you figure out it's going to be scanning lots and lots of information, we know that the kid needs to have an internal scaffold of a general information and a general vocabulary that would go with that topic in order to be able to read that profitably and recognize what needs to go in the book. Pleasure reading is so often a rather sensual, either deliciously sensual or terrifyingly sensual activity, whether you're reading *The Perfect Storm* or, you know, *Jane Austin*. In your mind you see the heroine with brown hair and wearing a calico dress. The author has told us that she is a blond wearing velvet. I really don't think that matters. But what does matter is what that person looks like and you carry a vivid image inside of you what it felt like to be on that boat when those waves were so high. You knew you were going to die. That's how these three kinds of reading are so different. We need to give kids permission to have three different kinds of strategies, and I think we need to teach them these strategies.

Audience: How long does it take to raise a child's level of reading a grade level?

Lyon: Well, in our individual trials with ten and eleven and twelve-year-olds, it's taking two hours per day, five days a week, for an entire year.

Vail: What I see in schools is that kindergarten teachers are teaching one thing, first grade teachers are teaching something else, and second grade teachers are teaching something else. There are trustworthy, well-established sequences for sound simple correspondence, and for the structural aspects of language arts. I think that your school can look at some of those and grab onto one and say this is going to be our banister. We're going to hold onto this and it's going to go all the way through the reading program. Begin now with your preschool and kindergarten while you are trying to deal with the group that is troubled. But don't let anymore of those groups come along.

Lyon: It's a great foundation to try to drive this home again. This morning you heard us talking about the things it takes to learn how to read. You've got to have this phoneme awareness stuff. You've got to develop the alphabetic principle, phonics. You need ways to develop automaticity and fluency. You need ways that direct comprehension and reading for different purposes. If we don't have good, strong data on a program, one thing I think we've got to do as professionals is look at what's available and see if it covers those particular components. Now, for younger kids I'll get myself into trouble here. But, sweeping the country for years was Reading Recovery. Reading Recovery does a beautiful job frankly of training teachers. Some of the things the teachers are trained or have been trained about may not be exactly on the mark. Be that as it may, it's a great training kind of thing. But Reading

Recovery initially was missing a lot of kids because the teachers weren't looking at it as they should. They were looking at it as a method and with some height to it. They didn't say, "What does it take to learn how to read?" and therefore, reading recovery left out the phoneme piece. So that's what I'm saying. Here's a nice structure, a basic structure, but it had left out some critical kinds of things, or they were so implicitly imbedded in everything else that quite a few kids were going by the wayside. There are a number of studies that will show that to us. Also, there's some very good work with Reading Recovery that shows when you add these things to it, more explicit phoneme awareness and so forth, the kids that were having difficulty bump right up quite nicely. So again, it goes back to looking conceptually at teaching programs and saying, "What does it take to learn how to read," looking at each of the programs to see if they're incorporating these significant kinds of components, and making your decision from there.

Butler:

When I was at Syracuse University, I was reviewing a doctoral dissertation. The gal was in the New York City schools and if you know the New York City schools, you know that they are a huge empire, and that they adopt certain curricular kinds of changes. Actually, because she was a member of the schools in the inner city portion particularly, she did a study that evaluated what first and second grade teachers thought of the reading program and how they implemented the current curricular program in reading. She also matched first and second year teachers against decade-old teachers. I don't think anybody who's been in the schools would be at all surprised to find out that what she found was that the first year teachers and the second year teachers were using the current curriculum which had been adopted by the school district, but was lacking some of the things that you just mentioned. The experienced teachers would actually use it, but they would also add the kinds of things we're talking about. That happened to be a whole language program. And the teachers with a lot of experience knew or had had enough experience to see children grow and change and knew that phonics was important. So they taught phonics anyhow. They did do what the curriculum said, but they also added that. There was a real difference then between experience and having some sense of your audience.

Lyon:

Balance is one of those politically correct terms. That means it's in the eye of the beholder. It's a necessary term probably in this stage of professional development within the reading community. People have invested a great deal in this very emotional enterprise of delivering literacy in reading instruction. Balance on the downside could mean a little of this and a little of that. If the balance is going probably to be used well, you have to be very attuned to what stage of reading or literacy is being addressed. For children who do not look like the kids that you saw on the film, if you do a little bit of this and a little bit of that, they're not going to get it. They really do require some explicit, direct instruction with these more foundational elements of reading. That's probably from the instructional format where most of their stuff has to come, given a limited amount of time. They have to, though, understand that they are reading for a purpose, and their job in learning these kinds of things is to make meaning. Obviously you've got to provide them with good, authentic text that shows them that, or they may not be able to read it. You can read it to them, in other words. So, you know, it's a tough thing when the emotion in this is sometimes funny, but in other times it's so sad. In the session before this, when there was a professor in here and she said as a neoconstructivist, I would do it this way, that's a bit unfortunate because, you know, there's already been a position staked out which is a bit abstract. The question really isn't what is your philosophy on this, it's how the children learn, and how does reading develop. Balance is part of that. Now this is my opinion. But we know enough to know quite a few kids really do require an explicit, direct, highly structured explanation of the structure of language.

Vail:

The late William Ellis, when this whole language/phonics controversy first began to boil around and get culty, said, "Well, instead of talking about whole language, we ought to talk about all language." I liked that phrase because what I think, what I have seen in over a quarter of a century of full time teaching is that language is made of both structure and texture, and kids deserve exposure and experience with both aspects of language. Texture without structure is like a will-o-the-wisp. It's a costume on a broom pole. It can look like a witch, but it can't walk. And structure without ornamentation is a ghastly bore. We need both, and kids deserve both. Here's what I see is the harvest of the cultish aspects of the patterns that we have fallen into as educators. And it's this. If we make a bell curve and we put 20% and 20% on either end, that will leave 60% in the middle. Now as you will soon see, this has a little bit of whimsy to it. Let's say that this 20%, we're going to call these kids the linen closet kids. These are kids who learn without benefit of our instruction, which is humiliating to us. These are kids who, in this era of the HMO, the mother could drive to the hospital, have a driveby delivery, take the newborn infant home and stick it in the linen closet until the child is seven and then let the kid out. And that kid would have in seven years, entirely on his or her own, have learned to read and count by using the labels on the towels and the monograms. These are the linen closet kids and they are very easy to spot. Now, I used this one time at a conference and asked for questions and I don't think it's funny to talk about putting children in the closet. So, I mean, I hope we can lighten up a little bit and that you're not going to think that I'm some sort of abhorrent monster. But we have twenty percent of the kids being the linen closet kids and they learn it all just fine, with or without instruction. Over here we have another twenty percent and these are the kids that we're here to talk about at this conference. These are the kids, they are also easy to spot, who need over learning and careful sequencing and extra exposure, and kindness and courage and enticement and structure and texture and all of that. They need it and they need it with direct instruction. This is pretty obvious. Here's what's just come to me as I read the research and as I reflect on my own experience and the schools I work with. In the middle is the sixty percent and of that sixty percent in the middle. I think three quarters of them, or seventy-five percent of them do not and cannot intuit the rules of the structure of language without direct instruction, and in the absence of direct instruction, they appear to be part of this twenty percent when they are not. With direct instruction they can learn and learn very nicely. And this is the group that has been, in my way of thinking, severely shortchanged by the educational system, which has assumed that by chanting with them and immersing them in story and song that they would catch on and they haven't. And this is a group to whom I believe we owe apologies and a group we must never allow to bubble along again. That's my take on balance.

Let me make just one other comment on kinds of reading. We know that one of the prerequisites to really being able to learn in a group and to learn abstractions is to be able to establish once and for all the boundary line between fact and fantasy. We are not looking for more of one or less of the other, but to have that boundary line. It generally comes in around kindergarten, but kids are later and later and later in developing that boundary line partly because of television, partly because of perhaps language issues. However, to reinforce that boundary line, as we are reading with kids all the way through, I think we need to be sure that we are offering them factual reading and fictional reading, and that we encourage them to distinguish between and among them to find ways of joining them and to know when and how and why they are separate. And that's a continuation of an internal psychosocial development that needs reinforcing, and we can do it through reading.

CHAPTER TWENTY ONE

Helping At Home

Moderator

PATRICK EVANS
CBS Affiliate WWL Eye Witness News Anchor

Panel Members

GERARD A. BALLANCO, M.D., FAAP
Pediatrician
Rothschild-Ochsner Group

ROBERT BROOKS, PH.D.
Faculty
Harvard Medical School
Former Director
Department of Psychology
McLean Hospital

EDWARD M. HALLOWELL, M.D.
Child and Adolescent Psychiatrist
Director
Hollowell Center for
Cognitive and Emotional Health
Faculty
Harvard Medical School

GLENDA THORNE, PH.D.
Clinical Director
Center for Development and Learning

Evans: My name is Patrick Evans and I work here in New Orleans at local TV station WWL, a CBS affiliate. This afternoon's session, "Helping at Home," deals with homework. My first question: Is homework important?

Ballanco: It depends on what you want to do. There are some skills that need practice and there are some skills that just don't need practice. To use mathematics as an example, if the child has mastered the addition tables, he doesn't need to go home and spend 25 minutes doing more addition tables. If the child hasn't mastered the addition tables, and this is a requirement, then there is probably some benefit in his reviewing those tables for a specified period of time. With some children, however, the whole process turns them off because they're tired and the information is very exhausting. A typical child can do homework without becoming too aggravated. However, for a child who has a learning problem, this can be torture. There is a point at which you have to begin to say, "Okay, is this helping or is it hurting?" If the parent is telling you that every night there's a battle in my household over homework, then there needs to be a serious conference between the teachers and the parents with the student's best interest in mind to say, "What are we going to do about this?"

About a month ago *The New York Times* addressed this issue. Do children who regularly do homework do better in school? More specifically, the article talked about Oriental families where the parents routinely went over information that was learned in class. It was not fun. It was not play. It was sort of the routine of the household. That's what they did in the evening. Those students did better than many other non-Oriental students. But these were certainly not children with learning problems. There was not a great deal of hostility in that interaction. The question of whether homework is valuable or not depends on how it's being done.

Thorne:

I agree. It depends on what the homework is. I work with kids who have school problems. Doing homework is one of the biggest nightmares for the parents that I work with. But I also know that many of these children who have learning difficulties are not going to learn all that they need to know during the school day. So they do need some reinforcement at home. I am the parent of two children who have attention deficits. My oldest son, when he was about in the fourth grade, made a decision. He was sitting at the kitchen table and he said,"I don't want to be like you, doing homework and getting good grades." He had made a conscious decision that it just wasn't worth it. That's how much he hated school. Of course, he also said to me when he was fifteen years old that nothing that you could do to him was worse than school work.

Some of this resentment toward homework can be eliminated or at least controlled by better communication among teachers. When a child has one teacher all day, then that teacher knows what the homework is. But when a child has even two teachers or several different teachers, then what happens is one teacher doesn't know what the homework demands are for another class, and so the child comes home with an overload. This is a problem for all children, not just those with learning problems. I hear from friends who have school age children that it sometimes takes them hours to do this homework. Better coordination among teachers concerning the volume of homework would be one step toward helping to solve the homework dilemma.

Children who have accommodations at school should also be given similar accommodations concerning homework. I work with a lot of kids who have graphomotor problems. Math may not be hard for them at all. But when they are doing their math, they are engaging in all kinds of avoidance behavior, not because they don't understand the math problems, but because they hate to pick up any kind of writing instrument and connect it with a piece of paper. If there were some kind of accommodation, like sitting with a parent and saying the answer to this problem is thus and so and having the parent write the answer, this would help alleviate this barrier. Of course, as the problems get more complicated, then this might not be so easy.

I also believe homework needs to be more than rote kinds of things that kids do and all the stencil and pencil and paper work. Homework should have more to do with application of information. If a child could have a homework menu from which he could choose from a number of different things to do to demonstrate his knowledge, he could pick something that might make it a little bit more tolerable or interesting to him as well.

Audience: At our school we decided that homework needed to be meaningful and purposeful. So we had school limits for all the children that no math assignment could exceed ten problems. It had to connect to something that had already been taught. No homework assignment should take any child more than 30 minutes to accomplish.

Hallowell: Much of this comes back to the connection the parent makes with the teacher. When you have the triangle of the student, the teacher and the parent working together trying to tailor a program that makes sense, the chances for success are improved. We get lost sometimes in the theory of having a discussion of homework and educational principles, but the action must be at home and in the classroom, and the key players are parent, teacher and child. If you could have those people negotiating with each other in a useful way, the goals are the same for all those people, namely to have learning take place. It may seem at times that the goal of the child is to get out of work, and that the goal of the teacher is to lay it on, and that the goal of the parent is to mediate between the two, but I don't think that's really the case. Having a 9-year-old myself who has both ADD and dyslexia and watching her at times struggling with homework, it's clear to me that we need to do something at home to help her structure her time and do the homework. It's clear that the homework benefits her in terms of learning, and now that she's experienced in mastery, she actually is connecting to the job itself. However, there are times some nights when she gets frustrated and doesn't want to do it. We've talked with the teacher about how much time she should spend, what to do when she gets ultimately frustrated, and the teacher says have her call me. Guess what? She doesn't call, because you know how she is. She works it out. If you take the homework issue on a case by case, child by child, classroom by classroom, parent by parent basis, in terms of the counseling I give to people, that's what works best.

By the way, there's not one method that works best for everyone. You know, I remember when I was in school in the fifth, sixth, and seventh grade. As I told you this morning, I went to a boarding school. I was lucky I got good enough grades so I didn't have to go to study hall. If you got a certain grade point average, you got out of study hall. So I would study in places around the school, and I remember vividly teachers walking past me and saying, "There he is again. Wasting time." I'd be staring out the window, or I'd be playing marbles, or I'd be rigging up some game because I wasn't in study hall, and the teachers would ridicule me. But I was always first in my class. What the teachers didn't realize was I did my studying in a very different method from sitting down from five to seven at a desk with a light and going from a, b, c, d, e. I just didn't do it that way. I was studying when they thought I was playing games. I was just studying my way, which was in little spurts, little snitches, little snatches, and then I had to do something else. I had to multi-test. I didn't call it that. They thought I was playing games.

There are a lot of kids who learn differently. Parents say, "No, you go to your room. Sit at your desk. Study from five to seven." In fact, some kids study better and do their homework better with the television on. I have one kid who studies best sitting under the sink in a closed space, because there's something about it that helps her organize her thinking. So she studies under the sink in that closed space. And the mother says, "Isn't that weird?" I said, "Well, it's unusual but I wouldn't call it weird." But remember, one approach, one method, doesn't fit all in the terms of how you get your work done. So, you know, I would just say yes, homework is necessary. It's helpful for everybody. But how much homework and how you do it - work out a plan with your school, with the individual teacher that fits the individual child. There's a lot more flexibility with homework than there is in class work, because in class work you're all on the same task most of the time, whereas at home it's a lot more flexible in terms of how it gets done.

Evans: Is it possible to actually work out individual menus with 25 -30 separate parents for 25 or 30 different kids?

Ballanco: Absolutely.

Evans: It is?

Ballanco: If the school is flexible. Sure, you've got to still take the same tests and you've still got to pass the same exams. But in terms of what you do at home, it is absolutely possible if the teacher and school are willing. Now, you can't have them studying totally different subjects, but you could certainly have different roads leading to Rome.

Brooks: We often spend much more time in battles and adversarial positions around homework than we would if we could really individualize homework. I'm looking at homework in several ways. About three years ago there was a large research project. A lot of people heard about it because it was published in Newsweek, and there was a lot of controversy about it. It found that there was no correlation between the amounts of homework the child did in the elementary school years and what their achievement was in school. Many letters came in that said, "Well, that's ridiculous." But part of it was probably how they were measuring homework.

My oldest son did no homework in the 8th, 9th, 10th, and11th grades. I got many warning slips. I did everything I recommend. I sat down with the teachers. I sat down with my son. We looked at what was going on. He did no homework. He was a lot like Ned in this regard. He'd be just playing with his computer. Today he runs his own business where he develops web pages for small businesses and professionals, even though he almost failed computer programming in school. The reason I bring this up is the following. I wish we could get rid of the whole notion of the word homework because of the whole issue of work for some of these kids. There are many kids I work with who have learning and attentional problems. They may need the reinforcement, so I'll say something for them. One kid said it best: "It's like climbing Mt. Everest every day in school, and then you ask me to do it again at night." I would rather some of these kids sit down if they enjoy the computer and play a game that they have made, so we can at least rationalize it. But asking them to go over what they've just done is painful. It is really painful. These are the kids who hear the next day, "You're not trying hard enough." It's very, very painful. This is really to reinforce what has been said. I love the idea of a menu. I think you could do it for 25 kids, because you know what you're going to find? In any class, there's so much overlap. It's not like you're developing 25 educational plans. A lot of kids will just naturally do the work you give them. There are other kids where you make accommodations in terms of the amount of work they may do in school or how they do it. You also make similar accommodations at home.

You know, I was just thinking about a crazy example. I coached basketball for eight years. I had ten or eleven kids on my team. I always had them do homework. You know what the homework was? If a kid couldn't dribble very well, I'd say, "I want you to dribble 100 times with your right hand and 100 times with your left hand." Another kid couldn't shoot very well. I'd say, "I'd like you to practice this." They never said it was unfair. "How come you asked me to dribble?" They did it because there was some purpose to it. They really could see some of the purpose. It was purposeful and meaningful to them. As a matter of fact, most of them did it 200 times or so, and I started thinking about that. For some kids, a half hour is all they can take.

In terms of accommodations, I would say there should be a maximum time for homework done. There is a school in Massachusetts for kids with learning problems where I consult. I asked the school if I could interview the students about homework. The results stunned the teachers. Supposedly the students are supposed to get at most an hour's worth of homework. Almost every kid I interviewed was doing three to four hours of homework a night. They were exhausted. The teachers couldn't figure it out. Now, what I was most surprised at in this very good school was that there just didn't seem to be some of this feedback back and forth. These kids said, "We're exhausted." One girl started to cry during the interview. She said, "I have no time to play with my younger sister. There's no family life anymore." And I started thinking, what's the purpose of homework? By the way, when I met with the teachers, they were extremely receptive. They said no child should be doing that much. And I said, "Well, there's some problem here. There has to be much closer communication because these kids are telling me this." In addition, many of the kids have to go about an hour or so in a cab. Many of them come from far away. So, I would like to see individualized plans.

I love Glenda's notion of a menu. The way I learned fractions in school serves as an example. I grew up in Brooklyn. I was a big fan of the Brooklyn Dodgers, and I'll never forget when this wonderful teacher said, "You want to learn fractions? Figure out Jackie Robinson's average." All of a sudden I thought, "Hey, there's a reason for knowing how to do this." Each night, you must know what Jackie Robinson's average is. What if he went 2 for 4? It didn't seem like homework anymore. I was becoming a statistician for the Brooklyn Dodgers, and homework was very interesting to me that way.

Panel:

You know, if you interview a lot of kids, of course they're not thrilled by homework. I mean, how would we feel if we came home from work and our kids said to us, "Have you finished all your work today? Because if you haven't, you know, there's more." A lot of kids feel homework is shoved down their throats. So if something's shoved down your throat, all you are going to want to do is regurgitate it. One of the best ways not to feel it's being shoved down your throat is when you have a sense of ownership. There's a school I visited where the kids have a built-in choice. They always have a choice. Every night there are eight problems. You have to only do five. You select which five. You know what the teacher did that she even found was more successful? If the kids did their work for two weeks, the third week they would have a homework pass. One night they did not have to do homework. What she found was this. She was getting much more homework than she had ever gotten before.

Hallowell: Another little trick just popped into my head. I was visualizing my daughter at home doing her homework. Another thing she'll do to make it meaningful and doable is she'll call one of her friends and talk about a particular problem she's working on. She has a study buddy friend who is a real brain. Lucy's a real gymnast, and they sort of trade off abilities. Lucy gives her some gymnastics pointers and this girl gives her some math pointers. They've got a good system rigged up, you know, sort of helping each other with their strengths and vulnerabilities. So add to that triangle that there are other kids in the class who can contribute to the effort of making homework enjoyable and meaningful.

Panel: Remember now, you're wanting to teach them models for life, and one of the best models for life is how to get a consultation, how to ask for help. And so, as long as they get to the solution, if they involve and chit-chat along the way, I mean, who doesn't?

One teacher said they care about having children create their own homework. It's really a good idea, and you'd have to have, of course, some criteria at first. But you could model it for the children by using something like a homework menu. If they then came up with their own homework, which was meaningful and reasonable, it would almost be like a self-test. The students would have to have a certain amount of information or a certain amount of understanding of the information in order to generate a meaningful activity to do. It would facilitate understanding. It would facilitate memory. It would facilitate higher order thinking. It could actually give teachers some ideas because my guess is that some students could come up with some really good homework activity that would be very meaningful.

Audience: If you've got a great teacher, then it really makes a difference. But you know the administration and the school board will come down on her if she is not giving an hour of homework. There's a mindset. But this is not just from the administration, but also from parents who say they don't understand why their child doesn't have homework in this class. Why aren't you teaching them? They seem to feel that if there is not homework there, then they're not learning anything in the classroom.

Thorne: I don't think anyone here has said don't give homework. I think they said that homework should be meaningful and relevant and reasonable. It's not an absence of homework.

Audience: What about the parents who want to help their kids and care about homework, but they work two or three jobs and just don't have the energy or time to help?

Panel: That's one place where study buddies can really help out. Kids can get on the telephone from home to a friend, or the teacher can make himself or herself available to take the place of the coach at home who isn't there. Some of these parents who don't help their kids are not bad people. These are people who are trying to make ends meet any way they can. I think the study buddy issue is one that can be developed more and more as kids become more cooperative and less competitive. We are all in this, whether it's fielding ground balls or learning how to cross-dribble or learning how to do math. We're in this thing together called learning. And if a school encourages that, it catches on and kids start helping each other out in all kinds of domains. Homework is just one of them.

Audience: I'm teaching kindergarten this year and the administration wants me to assign homework. But, giving homework in kindergarten?

Hallowell: I have very strong feelings about this particular issue. Parents and administrators who insist upon homework for very young children need to be counseled before they really do damage to the children and before they essentially take away childhood. It seems to be an American phenomenon that everything must be done sooner and faster. We have a tendency to push, push, push. Kids' homework should be to go home and play. The benefits of play are enormous. When I was a kid I used to do something that's now obsolete after school. It's called "Go out and play". And what you achieve when you play is so much better than any homework assignment you could possibly give a kindergartner

Audience: If I may interject, hold on to your feet. I teach kindergarten and they've taken away recess.

Ballanco: Well, as parents you don't have to roll over and play dead. I have some political friends who have said that for every letter that they get, they assume that there are a thousand people who have those same feelings. So, if enough people start going to enough school board meetings and saying this is really not a good idea and enough legislators get enough phone calls, and the people who are on the educational committees get enough phone calls, this kind of foolishness is going to stop.

Audience:

We all have great ideas and I've enjoyed every one I have heard. But the thing is that as we all know right now in the state of Louisiana there is a testing frenzy. Teachers are told at the beginning of the nine weeks, hold everything for nine weeks; all you think about is standardized tests. No interest, nothing for the next nine weeks but how to increase the scores on the standardized tests. You get a big test. Now here's everything you have to do about the test scores. And you know, we all have great ideas on how to improve things, but that's the bottom line and that's what we're being told in this state. You have to get these test scores up.

Panel:

I'd like to address the accountability thing that's in Louisiana right now. We know that there's a relationship between student achievement and teaching strategies. All teaching is not done through the drill and kill. Using strategies like cooperative learning and even things like field trips can be learning experiences. In fact, we know there's a lot of research on cooperative learning that shows it does improve student achievement and the student achievement is measured by very traditional ways. So a focus on increasing student test scores does not have to mean that we don't use teaching strategies that are effective like field trips. We need to do some education with the powers that be. There is also the issue of the children that don't have anyone to help them at home. There are children, and there will always be children, who need more than can be done in a five or six hour school day for them to keep up with the grade level expectations of their work. Some of that goes back to funding. For example, many of these children that have reading problems need individual remediation. That is a funding issue. That goes back to legislators. They need to provide the funding for these kinds of things. Programs like Homework Outreach can be very valuable and helpful, especially for those students who cannot receive help at home. But, again, this becomes a funding issue, so we have to educate those people that make decisions about where these funds are spent.

Audience:

There are many problems that I see with homework. Some parents feel that there is not enough and others feel there is too much, and often this is with the same teacher. Then there is the problem of some parents doing the homework for their kids. Other parents say, "Why should I be helping my kids with homework? Isn't that what we are paying the teachers to do?"

Panel:

Perhaps those schools that provide after school help are using one solution to the problem, at least for those kids whose parents aren't available to help at home.

Ballanco:

Concerning the too much or too little homework issue, I like Dr. Hallowell's point. I believe that it is our duty and responsibility to tell the parents of young children that play is the work of young children, and that as first graders their Science project about the moon can be to go out and draw the moon at night. As teachers, you can really select what you do.

Homework does not have to be boring or repetitive. It does not have to be something that the children have no connection to or from which they get no enjoyment.

Hallowell: But Dr. Ballanco, I think your point earlier about being politically active is right on target, because someone alluded to what is going on in Louisiana. We have a similar problem in Massachusetts. For students and teachers, school has become a test-governed experience. The Director of Education believes that if you raise test scores, you raise standards. What is a parent to do when he is caught in this crossfire between an educational policy mandating an approach to learning that you as a parent disagree with? You can't sacrifice your child. It's a really tough situation. I believe that this is where Dr. Ballanco is right. We must be politically active. We can't wash our hands of the vote and put these people in office. They campaign on the fact that they have raised the test scores. Who is going to be bold enough to say, "Yes, but look at the havoc that you wreaked in the lives of all kinds of children and teachers."

Audience: I'm a teacher and a parent, and I hear both sides. I have a child in fourth grade who is far ahead in every subject and says about homework, "Why do I have to do this?" I can't give her a good reason because she knows that in second grade she never had to write her spelling words and still got a hundred on all her spelling tests. Now she is in a totally different environment where the test is going to be a do or die situation in the year 2000. Education changes so much from primary grades to fourth, fifth, and sixth grades. We need to reassess. The only way we are going to have a perfect world is for every parent and every official to have an education degree and come to summits like this. One of my children had a teacher who told the parents right up front what her homework expectations were and how she felt the parents could help. I found this to be very helpful.

Brooks: Yesterday I talked a bit about the importance of orientation that teachers do during the first few days of school. A wonderful teacher in Massachusetts gave me a copy of one she had taken hours to prepare. It was one of the most beautiful documents I have ever read about what she hoped to accomplish. There it was in black and white for all the parents or caregivers to see. She sent it a couple of days before school began, telling the parents to call if they had any questions. In this document she carefully addressed the issue of homework, her expectations, and how parents could help. It would be wonderful if all teachers sent a similar document to parents. In addition to this, I suggest to teachers that during the orientation period they should talk to kids about homework. Do they think homework is important? What kind of homework do you like to do? What kind do you not like to do? This is done before any homework assignments are given. I love to involve the kids. You know, a lot of kids will not say there should be no homework. They just say that the homework they usually get doesn't matter. Then I love to ask the kids, of all the homework you have ever gotten, what have you not minded? What have you found to be fun? What has been the least fun? And then, in my workshops with teachers I ask them, What do you think the kids would say is the most fun and the least fun about homework? Most of them are honest and say the least fun are the rote worksheets. So I say, how many of you give rote sheets for homework? Ninety-five percent of the hands go up! Then I tell them, you know in advance that you are giving them homework that they are going to hate. And they say, we never really thought about it that way. Those are the kinds of exercises I love to engage in, and I do think all teachers should write philosophy statements about how their classes will be run.

Hallowell: Thinking about what you just said, I recall that the best homework assignment I ever got was also by far the most challenging. It occurred when I was in the 12th grade. I wrote a three-page story for English class and the comment came back on the story, "Your assignment is to now turn this three page story into a novel." Believe it or not, I did this over the course of the year, and in that process that teacher convinced me that I should become a writer. It was a ridiculously challenging homework assignment, but because the teacher followed it up with support and he obviously knew that I had some interest, it turned into not just an onerous assignment, but also a wonderful journey. I believe that the right, strategically placed challenge to the student can do that. It is not just some rote obligation that you are meeting, but a challenge at the right time. Now, not every student in the class needed to be told to go write a novel. I needed to be told that at that moment in time to get me to do something that the teacher saw I was ready to do. That's where the strategically placed assignment, whether you're talking about first grade or twentieth grade, can make a big difference.

Brooks: Thinking about Ned's assignment, I remember Mr. Manato, my sixth grade teacher and probably the toughest teacher I ever had. Mr. Manato loved us, and he knew that I loved art work. You know how he got me to write? He said, "Why don't you start doing your own comic books?" I was spending hours drawing comic books, but I also had to put in words. In this process I learned more about writing skills than I did any other way. I had to learn sequencing, plot, and many of the other important skills of story writing. Then I had to illustrate the story. The funny part of this is that I didn't think of this as homework or, in fact, as work at all. I was a cartoonist. Mr. Manato was one of those charismatic adults in my life who came after a year when I had felt very dumb after having had a teacher who told me I was dumb all year. He convinced me that I had a real talent. He took some of my artwork and he displayed it in the public library. Soon I was going into the library with my parents to see my artwork. I bring this up because it emphasizes the importance of teachers assigning homework that is meaningful and fun.

Audience: I want to bring up the issue of time again. A teacher may set the time as thirty minutes of homework for the class, but for my son this would amount to an hour and a half's worth. If you are going to set standards, you need to take into account that not all children learn at the same rate of speed.

Panel:

I like it where a teacher says, "You all learn differently," before any work is given. "If I give you eight math problems, some of you may only do four in the half hour, some of you six."

Evans:

In order to wrap this up I would like to tell you about something that popped into my mind that helped me, and perhaps will help you, visualize some type of summary to this whole subject. During the last full moon, the blue moon that we had in January, we bought a telescope for our kids for Christmas and we went out and set it up January 31st. After dialing in the moon the kids ran inside and got note pads and pencils on their own. There is a star and moon chart that came with the telescope, and they got it out and started writing things down without my saying a word. I finally had to drag them inside because the mosquitoes were eating me up. This illustrates that if you give the kids something that is intriguing and interesting to them, they will begin to learn on their own. It was their homework and it was valuable to them. If we can get this idea across to more parents and teachers, then all of our kids will be the better for it.

CHAPTER TWENTY TWO

Medicine, Learning and School

Moderator:

EDWARD M. HALLOWELL, M.D.
Child and Adolescent Psychiatrist
Director
Hallowell Center for Cognitive and Emotional Health
Faculty
Harvard Medical School

Panel Members:

GERARD A. BALLANCO, M.D., FAAP
Pediatrician
Rothschild Ochsner Group

MARK SANDS, M.D.
Child and Adolescent
Psychiatrist
Mercy Family Center

GORDON BLUNDELL, M.D.
Child and Adolescent Psychiatrist
Mandeville, Louisiana
San Jose State University

Blundell: I am Gordon Bundell. I am a child and adolesent psychiatrist.The bias that society has against the use of these pharmacological agents is not restricted to them. Probably the four of us on this panel have been biased throughout our lives about the use of treatment for the mind. I'm listening to Ned talk here and he mentions ECT, electro-convulsive therapy, as if that's a big no-no. Well, you know, it probably is to everyone in this room. But in reality it's probably a very good intervention for a lot of people with depression. It just still has a very serious statement. I think they tried to outlaw such a statement in Berkley, California once. I have a sophomore in college, my oldest son, who clearly has ADD. I'm a child psychiatrist. I never treated him with medication. He called me in the second semester sophomore year and said,"Dad, you know, physics is a little tough." He's at a prestigious university, doing very well, and I'm very proud. He told me that he goes to the library, sits and gets his physics book out, and fifteen minutes later it's over."I gotta get out of there," he says. "How about some Ritalin, Dad?"

Panel: The rubber hits the road, right?

Blundell: He's nineteen years old, but, you know, people compensate. Medicines aren't for everyone. Certainly, they can help a lot. Ned says he has ADD. I've known Ned since we were in our mid-twenties, and I don't think he took medicine back then. We took advantage of him because of his ADD. But it certainly, on another level, didn't interfere with his intellectual development and cognitive functioning, and he does very well. There are some advantages to having ADD. Ned talks about those very eloquently, and I've heard him leaving his audience almost wanting to have ADD. I see a lot of kids in my private practice. I'm in the trenches. I enjoy the work. I enjoy seeing the results these medications give to children, and it is rather striking when it works, unlike many other interventions we have for the mind. This one is really a good one. And with that, I'll pass it down the table.

Ballanco: I'm Jerry Ballanco. I'm a pediatrician with Rothschild-Ochsner and I've been taking care of children with learning and attention problems for about ten years, after twenty years as a general practitioner. I consider the medicine to be extremely useful. But I also share some of the Calvinism in saying that it shouldn't be a last resort. I don't think that a child should have his back up against the wall and everybody pulling their hair out before you consider it. Other interventions ought to be attempted first. Just as Gordon said about Ned, he's a very capable man and obviously didn't find out for a while that he had this. He knew something was not working right, but he was making it, and he was making it apparently pretty proudly. It's only when the youngster gets to the point that the interventions and the child's strengths are not carrying him through and he begins to start to falter that I think it's time to start to seriously consider medication. It is also important to include the child in the decision about the medicine, because again, if the child figures you're doing something to him without his permission, he's going to find a way to make it not work. He's going to revolt. A part of what we all do in dealing with the children and what we would encourage the teachers and parents to do with dealing with these children is listen to their point of view when the issue of medication comes up. Sometimes teenagers will say, "I'm not going to take it." What you hope at that point is that you have a good enough relationship with this youngster to say, "Okay, that sounds like a good decision. These are the areas of your life that you're having trouble with. Why don't we try to catalogue that a little bit? And then we'll try your method. We'll try these other ways for three to six months, and let's see how you're doing at the end of that time. If you're not doing well, then maybe we need to meet again and talk about it." There's a time for medicine, and when the medicine is used properly, it can be wonderfully beneficial. It has changed a thousand lives. A million lives. It really does. It helps families and it helps children. But we need to do this in a considerate fashion.

Sands: I'm Mark Sands. I'm a pediatric psychiatrist at Mercy Family Center. I want to take this subject in a little different direction. I think there is a good analogy between the use of medicine for ADHD and for diabetes. We don't ask kids with diabetes to control their blood sugar without intervention. And when we talk about an intervention for diabetes, we don't talk about adjusting medication. We talk about a three-pronged intervention that not only includes the medication, but also diet, exercise, and education, not only of the child, but of the parents as well. If we're going to manage diabetes properly and effectively, the child must be an active participant in the overall management program. When it works, we have a beautiful coordination because we have parents and children who understand what we are doing. The child can tell us how the medication in the program makes him feel, and then we can sit there together and figure out what the next most appropriate step should be. The parents are frequently one step ahead of not only the physician, but also the other members of the team. They are living in the trenches, day by day, and they come in and they ask the other members of the team for advice. This is what we saw, this is what we did, and this is how we managed it. What do you think about it?

It is some of the same thing when we talk about ADHD and when we talk about medications for attention problems, worry difficulties, or memory difficulties. These medications don't work in isolation. We have to remember that we must address multiple areas. The medication can be effective, but only when the person who is taking it understands why they're taking it, what it's supposed to do, and how it's supposed to help them. The whole team managing that individual must understand what that medication can and cannot do, so that we aren't putting children in situations where it is said that the only thing you need to do is take this medication. Not true. Part of it is recognizing that the medications are very useful, but also recognizing that we have to do the same things we do with diabetes. We have to educate the family and the child about what the medication is supposed to do. We have to teach them the mental health of how this particular medication could affect diet and exercise. What are the things in the environment where you study that can be altered or restructured to help you study? How can you be in control even if you're intent about those other aspects of how you feel, such as being depressed or anxious? Then you're able to put together a full system of support. Medications function as part of a system that helps a child to achieve his goal. The goal should not be to give the child a medication just for the sake of being on medication. It should help a child accomplish all the things that we talk about children accomplishing: to be happy, to be successful, and to be secure that their environment understands what their needs are and will help them accomplish their goals. Families, teachers, school, and church all belong to this environment. All of these things must be considered when we take a holistic approach to prescribing medications.

Hallowell: You've heard from each of us. Now, feel free to ask questions in whatever direction your interests lead you. Who wants to be the first?

Audience: Would you address the issue of long-term effects from taking stimulant medication and what the appropriate dosing schedule should be? Should you take it every day? Should you take it after school? Should you take it on weekends? What about during the summer? Can taking these medications become addictive? How long do you take this medicine?

Sands:

Some of the long-term studies dealing with younger kids and the effects of medications on growth have been very controversial and somewhat inconclusive. However, the issues that you're bringing up are ones that most parents I hear about are concerned with, especially the issue of addiction and dependency on drugs like Ritalin and some other drugs. Current studies have shown that there is probably a lower incidence of abuse and misuse in the population with Ritalin because it doesn't give you the high that some other drugs do. It doesn't get rapidly into the brain. It takes about an hour and a half to get there so that you don't get that rapid high that you do with some of the other kinds. So it seems to give us some protection against that. Again, I look at the issue of dependency in the way that I look at a diabetic using insulin. I don't expect diabetics to outgrow their use of insulin. I do expect them to need variations in their dose of insulin over time. It is the same thing with ADHD's. Every once in a while it's helpful to reevaluate what dose these individuals really need. Can their dose come down? Do they need a higher dose? There are many individuals over time who need to adjust their doses because of a variety of reasons. There probably are people who need it life long. On the other hand, there are other people who need it only for various stages in their life. Much of the issue of dosage depends on how you structure your life. Regarding the issue of drug holidays and the use of them over weekends, vacations, and summers, I'm not a true believer of drug holidays. My sense is there is a misperception about ADHD, and that is that it's an issue mainly for school. It is not. It's an issue in all other areas of life: with friends, with families, in church and during social activities. So, depending on the child and his symptoms and where and when he is having problems, there are a number of kids who truly need the medication seven days a week. There are other individuals who need it maybe only five days a week. If it is a time when there is no test that has to be taken, that requires no structure, that requires no planning, or that requires little participation, then it may be reasonable for some kids not to have to take the medications during the holiday times.

Audience:

What about the question of outgrowing ADHD?

Sands:

You have to remember that this is a disorder. Even though the medications were used prior to the time that I graduated from medical school in '78, the teaching at that time was that kids outgrew ADHD when they reached puberty at the age of twelve. This whole concept of adult ADHD and its lasting throughout the life cycle is only something that has come up within the last ten years. Previously, it was thought that there were other problems that these individuals had when they reached adulthood. It's only when people started looking more carefully that we recognized that it was ADHD continuing into adulthood.

Audience:

What kind of physical monitoring should be done for the child on this medicine?

Sands: Every time a child comes into my office, we monitor his height, weight, blood pressure and pulse. In addition, once a year I do lab studies and an EKG. Personally, I would do away with the EKG because I have not seen any usefulness to it at all. I do it particularly in the African American population because there is such a high rate of high blood pressure to begin with that I want to make sure I'm not missing any evidence of right heart strain or anything which does have significant impact. But I haven't seen an EKG that has told me to take a kid off Ritalin in the last ten years that has just been on the basis of an EKG finding. It's usually because they have other signs such as high blood pressure or high heart rate.

Hallowell: Let's hear from Dr. Ballanco and Dr. Blundell.

Ballanco: I just want to make one comment about teenagers. It's been almost a universal experience that when kids get between eleven and thirteen, especially the boys, they don't want to take this medicine anymore. They say I don't want to do this. I don't like the way it makes me feel. I don't like what it does. Also, going back to what we were talking about earlier and what Mark was just talking about, it's very, very important that this child's whole community be involved in helping him with that decision. Very often as young people go through adolescence, and it's not just children with attention problems, they learn what they do well and what they don't do well, and they understand the things that they like and the things that they don't like. Adolescence, in my feeling, is a good time to be experimenting with these considerations. What you don't want is to have a youngster graduate from high school and go off to college having never had the option of saying, "I want to see how I do without the medicine." That needs to be the kid's decision. When the kids start raising that question, rather than bucking them, back off and say, "Hey, that's a good idea. Let's see how you do." It's important to listen to the youngster when he starts balking about the medicine.

Hallowell: Gordon?

Blundell: Yes, on the issue of addiction. My position is that a happy child and a child who is well-adjusted is much less prone to drug abuse in adolescence and adulthood than one that suffers through a difficult childhood. So, I think the use of medication and the benefits they give far outweigh the risk of having to listen to the argument that kids are going to learn that taking a pill is the answer to solving all their problems. I don't buy that one. I review the long-term use of these drugs with every patient every year. There is no commitment for life. It is a year-by-year thing. It depends on the severity of the condition, the pathology, the child's attitude, and all these factors that both Mark and Jerry talked about and that we do review every year. I don't hesitate to give a child or an adolescent a little time off during the year if they want to see what it's like. The issue of seven days a week versus less aggressive treatment is a philosophical position and there are arguments both ways. I discuss both positions with the parents of the children and adolescents that I treat, and we make a decision based on that particular patient. That is a very individualized decision, and I tend to be on the conservative side on that one.

Hallowell:

Just to underline what's been said, your general concern is one about safety and monitoring, and what you've heard is that as long as these medications are monitored the way these men are monitoring them, you are on very, very, very safe ground. You can make an argument that aspirin is more dangerous than properly monitored stimulant medication. As I said, it's new that we're using these medications so often, but these medications have been around for a while. Amphetamine was used in kids for the first time in 1937, so it's been around for sixty years. There's a lot of research data. There aren't the long term, twenty-year studies, but there's an abundance of research data with the short-term use. If you look at the side effects of aspirin, thousands of people die every year from GI bleeds, strokes, aspirin overdose, and suicide with aspirin. None of that can happen with stimulant medication. It just doesn't happen. Yet, nobody thinks of aspirin as a dangerous drug sold over the counter, whereas stimulant medication is a controlled substance. So there's a matter of emphasis. If the medicine is properly supervised and properly prescribed, it is extremely safe. If you grind it up and snort it, is that dangerous? Yes. If you grind up and snort Cornflakes, that's dangerous, too, you know. So, you have to have a certain degree of sensible usage. As to its being a street drug, does it have value on the street? Let's take Ritalin. Does Ritalin have value on the street? Yes, it does. Why? Because it's illegal. Anything that's illegal to sell on the street has a price on the street. What is its future as a drug of abuse? I don't think its future is great. Remember what Ritalin does. It helps you focus your mind. It improves mental focus. That's not why people take street drugs. They take street drugs to get high. You don't say, "Oh, I had a great time last night. I scored some Ritalin and read three books." Therefore, when you use stimulant medication within the parameters of supervised usage, and when it is reviewed regularly in terms of what the target symptoms are and what the side effects are, you are in very, very safe territory. Would it be better to be taking nothing from a safety standpoint? Sure. Then you have to weigh the risks and the benefits. Is the benefit you're getting from the medicine justifying the risk you are taking in taking it? As to the long term, that's really the one unanswered question we don't have data for. We do, however, have long-term data on another stimulant, namely caffeine. And we have lots of people who have been ingesting caffeine every day of their lives for ninety years, and the side effects tend with the stimulants to be short term. If you are going to get side effects, they tend to be during the period that the drug is circulating through your system. It is the same with caffeine, with Ritalin, and with most of the stimulants. So there's no reason to suppose that there's going to be some tumor that we discover twenty years down the road. There's no reason to believe that will happen.

Audience: That's fine, but all too often parents go to a pediatrician looking for medication as the magic cure, and all too often the pediatrician provides it without making a thorough diagnosis. Could you comment on this?

Blundell: Yes, but Dr. Ballanco will be better at answering this than I am as far as the rest of the medical profession is concerned. I think the child psychiatrists in general probably do a very thorough job in evaluating children, in dispensing medication, following its course and staying with the child. We're a minority. But, for every child treated with ADD, the child psychiatrists probably take care of a small minority of them. Pediatricians, family practitioners, GP's, and internists probably do a lot of it. Like anything else in medicine, the field has excellent doctors and it has less than excellent doctors. It has people that are very careful and comprehensive, and people that are a little less so. If it's your child at stake and you're talking about their future, their medication, their body, you ought to be very careful with whom you pick and how it is done. Do people come to the office looking for medication? Absolutely. Recently I have heard the following: "Maybe my child needs to take medicine for the ACT or the SAT. He wants to go to a good college, but he's a few points short." If I haven't heard that fifteen times in the last three months, I'm underestimating. I understand that there's an issue at hand here. People see these remarkable improvements in children. Kids go home and say, "You know, my friend, Johnny, he's a different kid on Ritalin." So, we get a lot of these kinds of misguided requests. But as far as the evaluation treatment, I'll let Jerry talk about that. He's the pediatrician. He may be able to speak for the other fields of medicine better than I.

Ballanco: I could speak for the other people in my pediatric group. There are now nine of us. Over the past few years they have identified children who have symptoms of over-activity or impulsiveness, who basically have no other accompanying problems. They're doing pretty well at school. They're getting along socially, and their families are coping with this pretty well. So everything is on an upstroke except that at school the youngster is having trouble. Very often they'll get that information with all of that negative history. Now, I want to stress how important it is that the emotional life at home is good, the social life of the child is good, and educationally there are minimal problems except with over-activity, impulsiveness, and perhaps easy distractibility. After the school has done reasonable accommodations for the youngster to try to deal with these problems and after the child has been given medication and neither of these seem to work, then I inherit the child. In like manner, if some significant emotional pathology is discovered in the home of the child, the problem will be referred to a child psychiatrist. So there's a hierarchy, and if I weren't carefully monitoring all this process, I can't speak for how well this process would happen. My sense is that pediatricians are becoming better educated about for which children the decision to medicate would be a prescription for doom. There was recently an article in *Newsweek* titled, "Ritalin, How To Do It Right." It contained a lot of criticism thrown at physicians for giving the medication and then writing prescriptions and mailing it to the parents for a year without any evaluation. That shouldn't be done. It's the responsibility of the medical community to encourage its members not to do that and the responsibility of the parents to say this is not being done properly. But I'm really encouraged by the people that I meet at meetings about how much better they are doing in monitoring. So it's not just being thrown out casually.

Sands:

The key with any child is clearly looking at those areas of life that affect the child, and school is only one area. You have to look at how they're doing with play, with their peers, and with their family. You have to look at their emotional state. It is also clear to me that there are other factors that are affecting the increased drive to place kids on Ritalin these days from primary care providers. One of these is the insurance company. A lot of families are finding that they have absolutely no coverage for attention deficit hyperactive disorder to even go to the initial evaluation that comes to me or even a developmental pediatrician like Jerry to get the evaluation and have someone confirm the diagnosis. This is a reasonable course of action. In addition, there is no coverage for monitoring the results of administering the medications. A second issue is the overwhelming pressure on kids these days to achieve. There is this sense that if kids don't achieve in first and second grade that there will be significant difficulties for them throughout their life. Much of this pressure comes from parents. Parents must remember that the business of childhood, particularly for those first three years of school, is to have fun, to learn, and to be able to find out that by learning one gains something and that's what's important. It isn't grades. It's their sense of self-mastery and their ability to say, "I can now do today what I couldn't do yesterday."

Hallowell:

Let me underline what Gordon has said. These medications should never be used as brain steroids. They should not be used as performance enhancing drugs to bring up your grade a few points. We have to resist that all the time. There really are people out there who just want to pump anything they can into their kids to get their grades up a few more points. We have to be the gatekeepers who say no, and hopefully then ask why they want to do this in order to create a sensible approach.

Managed care is another important point. The insurance companies would love for this condition to be treated simply with a pill, and they reimburse along the lines that encourage that model. So it's not hard to see why a busy pediatrician maybe diagnoses ADD by giving Ritalin and seeing what the response to it is. That's not proper, but it's understandable. Basically, until we change the insurance system, it's going to continue to happen. It shouldn't happen, but it's going to happen. The right way of diagnosing this condition and treating it simply takes more time and a lot of insurance plans won't reimburse for that time. In my own practice back up in the Boston area, I don't accept any insurance for this very reason. That means that a lot of people are excluded from seeing me, but that doesn't matter. There are more psychiatrists in Boston than there are fire hydrants. So you know, there are plenty of other people who are taking the insurance. I just don't. That's the only way out of the dilemma that I could find.

Finally, a reassuring study was recently published in the *Journal of the American Medical Association* that looked at this very question. Is ADD being over-diagnosed and is stimulant medication being over-prescribed? They looked at it nationally by going around to centers all over the country, and the reassuring conclusion based on a very careful study was that, no, it is not being over-prescribed. If we think of the incidence of ADD as being roughly 3 to 5 percent of school age children, the rate of diagnosis and the rate of prescribing stimulant medication are approaching where they ought to be. So you can see the increase in all of these alarming articles:Why is the number of prescriptions rising? The fact is that this is good news. It means, indeed, we're educating the public properly. If the same were reported about beta blockers, they'd say, "Boy, what a good job the cardiologists are doing in getting the word out how effective beta blockers are!" Instead, inspecting the mind, a lot of people say, "Look, this is terrible." But if you actually look at the numbers, the numbers do not say that. They do not say these meds are being over-prescribed. Might they be in selected areas? Of course. As all of us have said, might some doctors in their hurry give them out too easily? Yes, indeed. But is it a national epidemic? The numbers say no it is not.

Audience: I have heard several people say that Ritalin is really good with younger kids, but that sometimes when they hit puberty that it becomes less effective. I want to know if you've ever seen that in your patients?

Blundell: The answer is yes. Bodies change dramatically during puberty. Do the requirements of the body change? Yes. Might a drug work pre-pubescent and not after? In my opinion, yes. The odds are it will still work, but there is no doubt that there are cases where it doesn't. I think that's the beauty of reassessing the situation every year. You can't put a child on Ritalin at seven and say we'll do this until eighteen and then we'll reassess. This needs to be done every year.

Audience: The other question I had concerns Adderall, which was mentioned by the panel. Is it a stimulant like Ritalin? Is it as tightly controlled as Ritalin?

Hallowell: Let me just take a quick moment and tell you what the most commonly prescribed stimulants are: Ritalin, which is a methylphenidate; Dexedrine, which is an amphetamine; Adderall, which is a combination of different length acting amphetamines for different amphetamine salts; and Cylert, which is another synthetic stimulant. Those are the most commonly prescribed. The first three are controlled substances. Whether they should be or not is another debate, but they are. Cylert, the fourth one, is used less frequently now because of side effects to the liver, and whether it should be used less frequently is a debated point. If a stimulant doesn't work, other medications can, and you don't have to start with a stimulant.

Everyone here has different opinions as to what their non-stimulant of first choice is, and in my practice it's Wellbutrin, which is also marketed as Ziban. It is the non-stimulant medication that I use first when the stimulants don't work.

Audience: Do any of you have experiences with a child who has ADHD along with an anxiety disorder? Is there a drug in particular that is more successful than others to treat this situation?

Sands: About 40% of kids with ADHD have co-morbid anxiety disorders. For example, separation anxiety and social phobia, or a panic attack and obsessive-compulsive disorder are paired up in a number of kids. A lot of these kids, at least in my practice, end up on a combination of a stimulant and a Serotonin reuptake inhibitor such as Prozac, Zoloft, or Paxil, which helps calm down the anxiety. A lot of times it's really a balancing act trying to figure out how you would adjust the drugs. It takes a lot of collaboration among the family, the psychiatrist and the school to figure out if we're gaining the maximal effects there that we need.

Audience: Have you compared Dexedrine with Ritalin for its effectiveness?

Blundeil: Yes, as far as which one to choose, it's six of one and a half dozen of the other. They're all a little different. Usually you pick the one based on the duration of action, family history of experience with the medication, and what you're trying to accomplish. Ritalin, in the short acting form, lasts about three or four hours. You have to give it a couple of times a day at least to get a child through school. I have had no success with the long-acting form of Ritalin. I rarely use it in my practice at all. It comes in only one size and so I don't use it. Dexedrine, on the other hand, comes in a few different sizes. It has a short-acting form just like Ritalin and a span that will last probably a little bit longer than the others, probably eight to ten hours if you're lucky. Adderal is an in-between drug which goes about five to six hours. Depending on what I'm trying to accomplish, I choose one over the other. All of them are equally effective, just in different ways. If one doesn't work for a particular child, I'll switch to another before I give up.

Audience: You just mentioned that you choose according to what you are trying to accomplish. What did you mean by that?

Blundell: An example might be an eleven to thirteen year old who enters junior high where peer pressure is intense. You make the diagnosis, and it's clear the family and the child want help. When you tell them that the child might have to go to the office after lunch to get his medication, that's the end of that game. In this case, I'd give the child the option of perhaps losing his lunch appetite by prescribing Adderal, a long-acting form which would eliminate the necessity of the after lunch dose. That would be an example.

Audience: What about with someone like an older adolescent? Would you use more Adderal?

Blundell: In my experience, yes. The older the child gets the more long-acting form I use.

Audience: Do these drugs create changes of mood or attitude in the child?

Ballanco: Sort of. The change has to do with the reticence about going to get the noon dose of Ritalin or the short-acting Dexedrine. And any one of these medicines has the opportunity to cause some sort of mood mischief. Fortunately, they usually don't. It seems like you're almost at liberty to change from one to the other without risking bringing on side effects. Yet, sometimes the children take the medicine and their mood is significantly altered. They may be sad. They may be giddy. They sometimes will even get sleepy. When the medicine wears off during a period that we call let down, they'll actually have an exacerbation of the symptoms that they had taken the medicine for to begin with. They may be very irritable and moody. So, yes, the answer is that sometimes when you change the medicine you invite mischief. Sometimes when you change the medicine nothing happens except that you have the benefit of the extended time of effectiveness.

Audience: Those two drugs, Wellbutrin and Risperidone, what are they supposed to do?

Sands: Wellbutrin and Risperidone are two very different types of drugs. Wellbutrin is a drug that is marketed as an antidepressant. It has a different chemical structure than most of the other antidepressants. It is used in the treatment of children who have anxiety type depression or mood disturbances. It's used also because you can get away with using a once-a-day dose of the medication because it now comes in extended release form. Children who are getting into difficulties with conduct disorders are very reluctant to take medications at all, so reducing the frequency of consumption helps lessen this battle. Risperidone is an anti-psychotic drug that is used with a lot of kids now because it seems to have an organizing quality for them. It also is often used in the evening to assist with sleep and reduce the moodiness of the disorder. The difficulty is that the studies with children with conduct disorders, at least what's been presented at the academy meetings, are very questionable about the usefulness of either of these medications with primary conduct disorders.

CHAPTER TWENTY TWO

Audience: Is ADD always genetic? What can you tell me about closed head injuries?

Sands: I see a number of people come to my office with relatively new onset, hyperactive, impulsive behavior and inattentiveness. When you go through the evaluation, you find out that there's been some very significant trauma that occurred to them, both in terms of emotional, physical or sexual abuse. The key factor to look for is what is causing the new onset. Kids just don't develop ADHD out of the blue. A child who has been going along and has a history of doing well in school, but all of a sudden has significant problems would fall into this category. You have to really look for those indicators. In the adolescent, the disorder might be caused by substance abuse. The two most common substances are alcohol and marijuana, which frequently signal a change in attentiveness, behavior, and a decline in grades. The other issue is that of closed head injury. I'm going to differentiate between severe and mild closed head injury. Severe closed head injuries almost uniformly are known to the family and to the school system. The reason why these children get into problems with attention deficit hyperactive disorder is that the frontal lobe, which is that area of the brain that controls selective functioning, is one of the most formidable areas of the brain to closed head injury. Your brain goes one way and it hits the back of the scalp and it goes forward. It's very hard to conceptualize any type of head injury in which the frontal lobe is not going to be vulnerable. Therefore, when you have an injury to this part of the head, you're going to see what looks like attention deficit hyperactive disorder. The other thing is the mild head injury. These are individuals, particularly your football players who have had concussions, have had a brief loss of consciousness, and who all of a sudden six to twelve months down the road exhibit behavioral changes and personality changes. You can also see an ADHD-like syndrome developing in that brain. Kids who ride their bikes without helmets or roller blade and have fallen may experience this as well. The thing to remember about this is that these kids usually do respond to a stimulant when you give it to them and it does help to treat the ADHD just finding out what's caused them to have post traumatic ADHD.

Hallowell: Any damage to the brain can result in a syndrome that looks like ADD. Whether it's a hematoma, a viral encephalopathy, lack of oxygen at birth, or the kids who are born to the parents who have been drinking too much during pregnancy, anything that causes any kind of change can affect the frontal lobes and you can have symptoms resembling attention deficit disorder.

Audience: Would it be neurological?

Hallowell: ADD is a neurological condition, in my opinion. The insurance companies will tell you it's an imaginary condition and shouldn't be paid for. But it's brain-based and frontal lobe-based. Lots of studies show that. Everything we've been talking about is neurological in the sense that it affects the neurons.

Audience: What medicine do you use for someone who has ADD and Tourette's?

Ballanco: Ten years ago, the thought of using a stimulant medication for someone who had a tic disorder would have ended you up in a courtroom, but this is now practiced. Over the years, that thought has changed to the point that now there are some people that even use higher doses of Ritalin in children who have Tourette's. There are medications, Orap is one in particular, which are very good medicines to control the tics of Tourette's. But very often they don't help too much with the ability to pay attention or the over activity. So there are even combined medicines, using Orap and Ritalin. My sense is that if you give a stimulant medication and the tics get worse, just about everybody uses the thought of prudent judgment by staying away from the stimulants and backing off, trying to find a different medication. On the other hand, if you give the stimulants and the child's ADHD symptoms are improved remarkably but the tics don't get worse, or if they only get a little bit worse, then you're doing okay. You need to monitor it. The strange thing that's always struck me about children with Tourette's, and this is not all children with Tourette's, is that they don't mind the tics nearly as much as their parents do. Even some teenagers who have some relatively remarkable sort of extraneous movements incorporate them into body postures and movements that make them seem like normal activity. If the main thing bothering children with Tourette's is over-activity and inattentiveness, then stimulants should be used. If you run into trouble, back away from that and take another choice.

Audience: How does ADD affect sleep patterns?

Hallowell: By far the most common ADD sleep pattern is you can't go to bed and you can't get up. So you stay up until two or three o'clock in the morning, buzzing on your computer, your email, your earphones, whatever would have some electronic stimulation. Finally, you close down at two or three a.m. The next day you're supposed to get up at 6 a.m. to get ready for school and you're comatose. You cannot be aroused. And not only do you have ADD at nine o'clock during math class, but also you have sleep deprivation, which looks like ADD anyway. So you've got a double whammy and this is not due to, you know, moral failing. These kids just can't shut down. I've seen kids flunk out of college because of the sleep pattern. It is a major clinical challenge and I would love to hear my colleagues' approaches to it.

Blundell: Patience and tolerance is first and foremost. I have seen a lot of medications used. Most recently someone who used Clonidine at night came into my office. I have not used it in years, but it was highly effective in helping this child go to sleep, and I just continued it. In general, I try to stay clear from medications at night if I can.

Sands: Sometimes I recommend giving a dose of Ritalin right at bedtime to help, and I have done that with two adolescents and have found that it has been very helpful. But I have not used that routinely because we have kids who have so much difficulty going to sleep even with the light doses of Ritalin.

Ballanco: I've tried that in a number of kids and it's helped for probably twenty percent. They take a dose maybe an hour before bed. Another thing that patients have told me about is one of those herb preparations of Melatonin. That seems to be safe and it helps the kids to go to sleep. Sometimes it doesn't work. Sometimes people take Benadryl.

Audience: Is there any way to truly diagnose ADD?

Hallowell: Is there any proof positive test like a brain scan or a characteristic EEG finding or a blood test? The answer is no. There is not such a proof positive test. We have to rely on a clinical diagnosis; that is, we combine history and neuropsychological testing with whatever relevant medical data such as has been mentioned earlier to reach a clinical diagnosis. But it can never be proven. It can never be proven in the way of a fracture that you can see on an x-ray.

Blundell: It's a function of listening to the parent, watching the child, getting data from the school and doing it comprehensively and thoroughly. There is no substitute. You can use a Conner's test, one of those little computerized tests, and checklists, but I don't think there's any substitute for connecting with the child and the parent and figuring out what's going on.

Sands: Working with the school and getting messages from the school to help figure out what the teachers are seeing is essential. Working in your office, you are going to see part of the picture, but you can't see the whole picture. You have to get confirmation about what you are seeing.

Hallowell: Yes, I think that teacher comments are just invaluable. If there's one part of the diagnostic assessment that I would call the key, it's the narrative teacher comments.

Ballanco: I also think it's a critical part. The electronic tests that are used are sometimes abused. Diagnosis made on a computer printout is completely inappropriate. Data from the schools is sometimes to my dismay reluctantly forthcoming. It's very frustrating to me sometimes to ask the teachers to give me some feedback as to what is happening to this youngster during the day. Is he having trouble in a particular subject, is he having trouble at a particular time of the day, or is it at all times? Sometimes getting that information seems to be paramount to solving the world peace problem.

Hallowell: I believe that this panel has agreed on just about everything, and it is not just because we are friends. We really do stand on ground that has been scientifically tested, and we say the same things in Boston that they are saying in New Orleans, and they are saying the same things in Los Angeles that they are saying in Minneapolis. There is now a body of knowledge regarding the medications we use to help kids with learning problems that is a solid body of knowledge that you can rely on. That's good news, and it points toward a future that is a really positive one.

CHAPTER TWENTY THREE

Increasing Family Involvement

Moderator

ANNE HENDERSON
Education Policy Consultant
Center for Law Education
Washington, D.C.
Institute for Education and Social Policy
New York University

Panel Members

HONORABLE DAVID ADMIRE
Judge
King County District Court
Redmond, Washington

GLENDA THORNE, PH.D.
Clinical Director
Center for Development and Learning
Covington, Louisiana

EMERSON DICKMAN, III., ESQUIRE
Attorney at Law
Maywood, New Jersey

Henderson: We are delighted to be here, and we are delighted that you decided to spend the next hour or so with us. Emerson, would you like to start us off?

Dickman: It seems that we have an even number of school personnel and parents here, which I think is great. I've been involved for twenty-five years in parent organizations. I was president of a local, what we called special needs PTO at the time. Somebody asked about how to get parents involved. I found that when I got involved, and this was quite a number of years ago, my older child had a disability, a developmental disability. My younger child also has a learning disability, but this was concerning my older child at the time. What I found was that the interested parent kind of waxes and wanes on a regular schedule, depending upon what I perceived as a kind of paranoia based upon a feeling that you're being kept out of the loop from school districts. Interestingly enough, we had a wonderful organization. We had wonderful speakers come in. When parents, even after the first couple of meetings, noticed that the teachers and administrators were just as interested in this information as they were, a lot of them began to feel it was no longer necessary for them to be involved because the people that were doing the direct instruction were actually showing that they had an interest. Therefore, they didn't have to give up their evenings or their Saturdays or whatever it was. So gradually the need for the organization dissipated until there was no organization. Then, about a year after that, a new group of parents came in, complaining that the school was keeping them apart. They came together and they had the same kind of profile. One of the things that I have noticed over the years is that there's a difference between the school and parents. They have different goals. They have different objectives. As far as the schools are concerned, they are really interested in the good of the whole student body regardless of how much we focus on the individual child, whereas the parents or an advocate like myself have the advantage of being able to focus on the needs of an individual child. The school is interested in long-term outcomes very often, whereas the parents are very interested in short-term goals. What can we do now for my children to make them happy? Happiness seems to be the primary goal for the parents, as it should be. Achievement and outcomes related to the primary mission of the school seem to be what concern the school. There are also concerns regarding resources. Schools see limitations on resources that are available, whereas parents very often don't see limitations insofar as the needs of their children are concerned. Then there are the issues regarding the systemic problems, such as aptitude achievement discrepancy formulas and research to practice issues. So essentially, what I'm saying is that there are differences, and if parents recognize that differences exist and the schools recognize that these differences exist, they can talk together in a more meaningful fashion rather than constantly trying to say, "Well, we're after the same thing that you are, "or the parents saying, "Well, you know, the school is not meeting the parents' expectations."

Not enough is done when the school does an evaluation and looks at a child's needs. The school looks primarily at the child's needs with regard to his ability to achieve academically. So when the parent comes in to an IEP meeting, the identified disability is not described in terms of the manifestations that occur outside of the home. How is it going to interfere with the child's ability to relate to his peers? An example I used, for instance, was an auditory discrimination problem. We recommend in the IEP some strategies for the teachers to use in school, but we never tell mom and dad that's why he doesn't come when he's called to dinner. And every night dinner starts off with dad calling up for the child who's upstairs listening to TV or something like that, and he doesn't come down. Dad calls again and again, and finally he goes up and he slaps him in the head and dinner's a pain in the neck every single night. The school could have done a lot about that. The school could have explained to the parents that this is what you're going to see at home. It's not because the child is oppositional, not because he's deaf, and not because he doesn't care. It's because he's not prioritizing the information that is reaching his brain auditorily. The schools can do a great deal to help parents if they help to describe the manifestations of the disability that they are seeing in terms of its social and emotional impact and in terms of how it interferes with relationships outside of school.

Thorne:

I have had the circumstance of actually coming from the perspective of a parent who has two children with attention deficits. Actually, I tell parents that I work with that one of the happiest days of my life was when my youngest child finished high school, and that I didn't have to play the role of parent anymore. I also was in the public school system for a number of years where I did evaluations with pupil appraisal. From that position I was able to see the school's predicament and perspective about parent involvement in trying to get parents to participate in their child's educational process. Sometimes it was even difficult just to track parents down to get permission to sign for testing. Sometimes it could take weeks to do that. I also saw from the school's perspective the discouragement that they felt from trying to get parents involved, and also from feeling that there is an adversarial position between the parents and the school. Parents blamed the teachers and the school for not being successful with all students. Now I'm in a clinical setting where it's not the teachers that are coming to me and saying, "I have a problem with this child." It's parents that are coming to me and saying, "My child is having a problem in school." I hear very similar things from the parents. They feel they are in an adversarial role because the school personnel don't seem to care. They don't feel like their voices are heard. They don't have enough control.

This is a complex problem that will require complex solutions. As I was listening to these different speakers today, I was thinking of some things that might be helpful. I do believe that the ultimate responsibility for a child's education belongs to the parents. However, taken from Bob Brooks' perspective, if the teacher wants to make a change in the child's behavior, then she must first make a change in her behavior. In like manner, if schools want to see a change in the parents' behavior, then there could perhaps be a change in the school's behavior. And I'm thinking of simple little things. Bob was talking about the teacher who called every student at least twice a year. It would also be wonderful if teachers would call parents at least twice a year, not just to tell them about a problem, but also to talk about positive things. It would be wonderful if the principal and vice principal, the administrators of the school, would also make it their plan to call each parent twice a year. Really, when you look at the number of parents and the number of administrators and the number of phone calls a day for 180 days, it would not be that many calls each day.

I'm also thinking of Bob's suggestion of telling difficult children that you need their help. We could take this same strategy with parents, that we need their help. Give every parent just some little job because the research clearly shows that parent involvement does not have to be at a level of being able to re-teach concepts that were taught during the day or being able to help children with their homework. It shows that any type of parent involvement increases student achievement. We all know that we have parents who are not able to come to the school during the school day. We have many single parent families where mothers and fathers work and there is not an option to come to the school during the school day. We need to get them engaged in some way that would work for them. Of course, that would take a lot of communication between schools and parents.

In the project that CDL is doing, the Learning Connections© project, one of our goals is to increase parent involvement in the school. It is considered important because the research shows that parent involvement of any kind, even if it is coming to help rake the school grounds, helps improve student achievement. CDL has what we call Parent and Pizza nights. We have the families come to the school at night with their children, we give them supper, and we provide things for the children to do, including baby-sitting for the younger kids. Then, while the kids are having fun, we have short educational and informational sessions for the parents on such topics as

How to Have a Win-Win Parent-School Situation, How to Have a Successful Conference with Your Child's Teacher, How to Help Your Child with Homework, and the like. We have been very excited with the positive response from parents at these events. The best turnout we had was when the schools provided a simple reward system for students who brought their families, such as a homework pass. Some schools had a pizza party for the class that had the most parents come. The parents that attended were excited and grateful, and they asked for more. So, when we start with some of these little kinds of things and look at the behavior change from a psychological perspective like Bob was doing this morning, we can do a lot to encourage increased family involvement.

Admire:

If you think it's bad in the schools, you ought to come to the court and see where there are no parents there when the kids are going to jail. I want to turn this around a little bit. Most of you are in the educational system, and I think that you may be looking partially in the wrong place for solutions. I've had this question for the educational system. Why is it that kids for the most part start out in such a nurturing environment, but when they reach high school age, or sometimes even earlier, this nurturing environment seems to dissipate? My whole point is that we should try to nurture these kids to get better and to do better. I have found some of the most incredible teachers who understand LD, ADD, and the difficulties that some of these kids have. If you're an administrator and trying to involve the families in your schools, while those people can do such a great service for you, you only need one bad teacher to ruin it. My oldest son has multiple learning disabilities and ADD, and in the eighth grade he was tested. He was found to have scores in math at the postgraduate college. He also happens to have fine motor skill problems, so he can barely write. In high school they flunked him in math because he wouldn't show his work. He was doing it all in his head. Nobody disagreed with the fact that he had learned the material, but they flunked him anyway. One teacher or decision like that can destroy a student. Now, I am lucky, because I have the ability to fight this situation. But, what about the parents who do not have the knowledge of how to deal with the bureaucracy of a school system? They may go to the school to get reports or attend a meeting, but they are met with little help to understand the situation. It only takes one situation like this to turn parents off.

Now, let me give you another example. We have very thick files on our kids, and each year we send them to their teachers for review. My one son in junior high school had a special education teacher who, in April of the school year, suggested to us that we should check him out to find out if he had attention deficit disorder. Not only is this contained in the school file, the file also states that he is taking medication for the ADD throughout the school day! Again, one teacher, as well meaning as she was, could ruin one family's desire about how they were going to proceed. My point is that, not only do we have to be concerned with the parents who don't seem to care, we must also be aware of those who do but are turned off because they don't know how to deal with the bureaucracy of the system.

Henderson:

I think it's kids who have multiple counts against them, whether they have special needs or are perceived to have been given various labels like at risk, or minority, or behavior problem, or perhaps they are from a broken family, who are, in fact, most at risk. Children often get these labels and they stick throughout their whole time in school and very much influence the children's perception of themselves. This carries back to their families, too, and how the families combat that. One thing running through what our panelists were talking about has to do with relationships. Schools are really a bundle of different kinds of relationships among people, and the quality of those relationships greatly influence how well children do in school. The key to engaging families is again looking at the way of reaching families and connecting them to school and helping the teachers and parents get to know and understand and trust each other. It all boils down to the need to create relationships that work, that are healthy, and that are friendly. That goes beyond the sort of routine that so often happens. Most schools have big events when they encounter parents. They have back-to-school nights. They have open houses. They have big parent meetings and things like that where it's hard for people to really break the big group down into smaller groups and pick people out that they want to get to know better and develop the kinds of friendships that need to form around children for children to feel really well supported. The parent-teacher conferences that happen one-on-one are often seen as a very intimidating, high stakes thing for many families. Usually there's a very limited amount of time, like twenty minutes. But for the constant conversations, interactions, and discussions that need to take place around how children are doing, how they can do better, and what needs they have that are or aren't being met, there's just not the time structured into the school schedule to do this. It's not part of the job description. It's not part of the day. It's not part of the expectation. It just doesn't happen. I think in part it's because the classrooms are too big. One of the important things about having smaller classes is that it makes closer relationships easier to happen. If a teacher has fifteen or eighteen kids, the prospect of being in touch with each parent is heightened. I think a teacher should be in touch personally with every family at least once a month. Twice a year is not often enough, really. I know we're all thinking about the load on teachers, but if a teacher has only fifteen or eighteen or twenty kids in the class, then having some kind of personal contact, whether it's just running into the parent after school or before school, making a phone call, or going to some kind of event at school and getting the parents' side and having some sort of meaningful personal interaction, would reap huge benefits. That's the kind of environment where kids feel supported, where parents feel welcome, and where teachers don't feel totally overwhelmed at having to do one more thing.

I think that our schools are too big. It's not just the class size, but the school size that matters, too. I've been in way too many middle schools where there are a thousand or twelve hundred or fifteen hundred or eighteen hundred or two thousand kids milling around, desperate, lost, terrified, in this huge, sort of sink-or-swim environment. These kids are just little more than babies in these huge, scary environments where their teachers see a hundred to a hundred and fifty kids a day. When I talk to teachers about this and I see they never got to know the kids better, their response is "Are you kidding me? I have a hundred and fifty kids. How am I supposed to get to know these kids?" And that's a middle school in trouble. High schools, of course, are even worse. If you look at the student achievement data as measured on the National Assessment of Educational Progress or on the TIMS test, the Third International Math and Science Test, or your state standards-based tests, what you see in every state across the country and nationally is that the kids at elementary school are doing pretty well. Most kids are at least average or above, with notable exceptions, of course. But at least half of the kids are where they should be. But, by the time they get to middle school, we're starting to fall way behind our international competitors and below where our kids should be. And by the time they're in high school, it's even worse.

Now, what is this saying to us? There's nothing wrong with the kids. The longer the kids are in the system, the worse they're doing. Is this the kids' fault? I don't think so. And there's no law that says that you can only have one school per building. In New York City, they're closing down their blackboard jungle high schools and middle schools and they're opening up new, small schools in their place, sometimes even in the same building, and they're letting teachers and parents and the students design those schools. So, if you have a great big, unresponsive middle school, one way to deal with that is to really break it up into four different schools that aren't tracked, but are diversely mixed and have a team of teachers who are responsible for a smaller number of kids. In these schools it becomes part of their responsibility to get to know every one of those kids and their families well. If you do that I guarantee you will not have a problem with parent involvement because you will be creating a place where the relationships work, where parents feel that they are part of the design of the whole school and the development of the mission. This is something that I see again and again in schools that have turned around, where low-income parents in the schools expect very little and make marvelous contributions. They watch their children. They know them better than anyone else, and they know what their kids need. They need a lot more attention and care than they're getting. There is a "praise deficit," as Dr. Brooks talked about. So, when we're thinking about the problems in American education, we're not really talking about changing this little bit or that little bit, creating a little bit better curriculum, providing a little bit better staff development, or maybe changing the way teachers learn when they go to college and become teachers. We're talking about really needing to transform our schools into places where close, happy, trusting relationships are possible. They need to be on a scale where this happens. It needs to be a priority. We need to understand how important this is for student achievement. All sorts of things can happen. The culture of the school will change. You need to get about a third of your families actively involved, asking a lot of questions. What are the standards? Are my kids learning what they need to learn? How will I know if they are? Does the curriculum cover what the standards-based tests test on? How are kids doing, what can we do about it, and how can the parents be involved? If the school is full of parents asking questions like that, things change. Let's open it up. I know you all have comments and questions.

Audience:

First of all it's incomprehensible to me that you would have to try to get a parent involved or that you would have to have inducements to get parents to attend school functions. It seems to me that if you have to try this hard to get parents involved, you've already lost. I mean, our children are our most precious gifts, so I don't understand what the problem is and why we have to induce or encourage parents to become involved in the first place.

Henderson: Does anyone on the panel want to respond?

Thorne: I would like to. First of all, I think that if all parents had embraced your attitude, we wouldn't be here. You talked about the relationship between education and society and parental involvement, and I think there is that relationship. A lot of folks say that the whole family unit is deteriorating more in our society and you have more single parent homes. It's not like it was years ago where mothers stayed home and the father worked, so the mothers had time to be involved in their child's school and did volunteer work. We don't have that kind of society anymore. I think that we just have to accept that we don't and that sometimes it will take these things, these gimmicks and these strategies, to get parents involved in the schools. We must also accept the fact that schools intimidate many parents. I'll speak from my own experience. The worst thing in the world for me was to have the phone ring, pick it up, and have it be someone from my child's school.

Henderson: It was bad news, huh?

Thorne: Well, it was. At the high school he went to, the Dean of Students and I were on a first-name basis and we were really good friends. You know, I had this typical, difficult child for my oldest child. However, I remember my youngest son's third grade teacher for this procedure she followed. She always called every single parent in for a conference early on in the year, and it wasn't a conference to talk about negative things. It was just to talk to the parents, to get to know them, and to have them talk about their child. It was only a fifteen-minute conference, but it was probably THE only positive experience that I had. So I think for teachers and school personnel to routinely call parents and have contact with parents would really make a difference, even if it is only to tell them that they are really glad to have their child at this school. I think that many, many parents are truly interested in their child's schooling. However, many are reticent to become involved because they feel intimidated. They're going to leave this job to the experts.

Dickman: I think the best thing that happened to one of our kids is when in the fourth grade his teacher moved to the fifth grade and took about half of her class with her. At that point, they saved probably three months of getting to know each other and getting to know each other's learning styles and teaching styles. It was amazing, and you know, it was phenomenal to see the difference in how much he learned in that next year because of this familiarity.

Thorne:

That's a practice that's spreading. They're starting to have some really dramatic results district-wide in Texas. The Texas Education Reform really seems to be working. One of the things that they're doing is they're recognizing schools with high achievement. But to be recognized as an exemplary school, you have to have seventy-five percent of your children passing all parts of the state test by different ethnic groups. It used to be that a school could be an excellent school if the average score was eighty percent, but this means now that for the schools really to be recognized they have to be reaching every segment of their school community. One of the things that they learned is that they can't do that without working with the parents. There's no way they're going to have those kinds of things from low-income Latino and African American kids unless they work with their families and get to know them. That really puts the onus on the schools, and I think that it's so important to remember that. What determines whether a parent is involved depends a whole lot on what the schools do to reach out to welcome the families, help them understand that it's important for them to be involved, and that they can really make a contribution if they are involved. So many schools say, "Well, we can't get anybody involved. We had an open house or we have our PTA meetings and nobody comes. They just don't care about their kids." It doesn't mean that they don't care about their kids. It means they weren't consulted. They don't feel comfortable being involved in those ways. They don't feel that the school is going to welcome them or that they have anything to contribute to something like that. So they stay away. It takes a lot of personal one-to-one outreach to turn that situation around.

A psychiatrist at Yale has developed a school development program that emphasizes very much this social interpersonal relationship that needs to happen between the school and the parents. Teachers get to know parents in a more social way. They do a lot of dinners and recreational things and fun nights and stuff like that where there's not-so-high stakes and they're not talking about what's wrong with kids or what needs to happen at home so the kids learn better. They're just becoming comfortable with each other and getting to know each other better. That seems to build the foundation to allow parents to feel more comfortable about active participation. Parents are more likely to come to events where their children are performing or student work is being shown rather than a business type meeting. These can come later, after the comfort zone has been established. Start it out with the stuff that's friendly and not threatening and that helps people bridge their educational, social, cultural, class and ethnic differences.

Henderson:

Well, we have barely scratched the surface of this most important topic. The bottom line must be that for school to be most beneficial for kids, there must be a partnership between the parents and the school. We must continue to seek ways to improve family involvement in the schools and stop using excuses for why it is not happening. Thank you all for your contributions.

CHAPTER TWENTY FOUR

Teacher Education in Louisiana

Next Steps Discussion

Co-Chairs:

JEFFREY GORRELL, PH.D.
Associate Dean of Research
and Graduate Studies,
College of Education,
Auburn University

JOSEPH SAVOIE, ED.D.
Commissioner of Higher Ed.,
State of Louisiana

ROBERT K. WIMPELBERG, PH.D.
Dean
College of Education
University of New Orleans

Wimpelberg:

We're very happy to see all the folks here who have stayed with us. I see we not only have higher education faculty members, but we also have some home town folks who have come to us from elementary and secondary classrooms and who are very interested in this discussion. For all three days that we have been here we have been talking about ways to make connections: connecting teacher education to classrooms and connecting teacher education to issues of concern for parents and the community. First, we are interested in reactions from those of you in higher education to these topics. Second, we would like to talk about the implications that all of this information has for teacher education. Finally, we would like to discuss ways that we can systematically take this information and sustain the interest to create change in our educational systems. Let's start with what is on our minds based on what we have heard in the last three days. Relative to the way that we prepare teachers, how would you react to the ideas that we have been hearing the last three days?

Audience:

I'd just like to say that classroom teachers are often isolated. Also, the College of Ed has often been isolated in that we have not really had the contact with the medical profession or the legal profession. Why is this true when we are all on one team, caring about the same things? This was just a great forum for that. I'm personally very inspired by a lot of what I've heard. I think some of us have thought about these ideas that were presented and we just needed to hear someone else put them in common, beautiful, and inspiring language to really make the ideas come home again and send us off feeling so edified.

Audience:

I'm particularly concerned about the lack of lines of communication between the State Department of Education, Universities and LEA's. Let me give you an example. I am specialized in early intervention and special education. I am teaching awareness, developmental phonics and all the things we're supposed to be doing to teach reading. Most of my students are already teaching in schools. That brings up the whole alternative certification issue we may want to address, too. She tells me,"My principal doesn't allow a phonics book in the school. What am I going to do?" The examples of this kind of thing come to me at least a dozen times a day. My concern would be, how do we open some channels of communication between the different levels of providers of educational services to children with common goals, common themes, and research- based practice?

Audience:

My issue concerns teacher preparation programs that are in transition. We're being required to mentor the cohorts of students, increase clinical experiences, and increase collaboration with the P-12 schools. At the same time, we're expected to do that while conducting research and writing articles for publications.

Audience:

Someone on a previous panel gave the wonderful example that we're teaching our students to fly jet planes and then sending them into a context where the road is too full of potholes to drive a car. I feel that this also describes much of our own infrastructure and support. The new standards, which will be performance based, really change our methods of delivery and how we measure and demonstrate the effectiveness of these new methods. A result of this might mean a reduction in the numbers of students that we are preparing to become teachers. It seems that a number of universities are putting caps on how many slots they have in teacher education courses. This is the logical response to having to put such intensive work into each student as well as the demand for increased follow up. If this reduction in the number of student teachers reaches fruition, then what do we do about the teacher shortages that are then created? Are these problems really being discussed at the higher levels?

Audience:

I believe a lot of us on faculties at colleges of education are feeling like there is more emphasis on turning out bodies and certificates than there is on improving quality of teacher preparation programs. I would like to see a group address the issue of reaching agreement on what is truly important in teacher education programs.

Audience:

I would like to ask how those in the upper echelons of colleges of education feel about the requirement that all teachers be certified, and that part of this be a requirement to take courses in parental and community involvement. I have heard some professors of education on the east coast say that there should not be a requirement that teachers be certified, but that dedication of the individual, good mentoring, and all of the other pieces of good teacher preparation are all that is needed.

Audience: If we're going to have any serious attempt at educational reform, the university must buy into this reform and value teaching. That seems so simple, but a research university, such as LSU, does not necessarily promote that. Statements have often been made to young junior faculty trying to get tenure that they don't have to worry about mediocre teaching, it's only important that they get their research done. I think that's a sad commentary from a college of education. I know it's not just LSU, but it's out there and it's a pervasive attitude that needs to be addressed. One would think that at least a college of education would value teaching among its professors who teach undergraduates, as well as those who teach grad courses. I don't know how that can be addressed because it seems that it all comes down to money, finances and numbers.

Gorrell: At Auburn, we face the very same problem when we have senior faculty who tell junior faculty, "Don't do anything except get the research out, because that's what's going to get you promoted." Part of that is based upon the problem of colleges of education being in universities that live and die on the liberal arts and science model that says you produce scholarship. This scholarship is typically individual scholarship that leads to publication for someone. So, we're trying to live up to a university standard. One of the things that we've done is to work at the tenure promotion level across the university at raising the understanding about the roles and the scholarship that's involved in addition to the involvement in the schools. That by itself doesn't do everything. However, it does start allowing for faculty who are moving to the tenure process and who really want to work with the schools to find some support for the idea that they're not going to be left high and dry when it comes time for the tenure promotion process. We also found that we have to deal with it internally in the college, and that's even sometimes a more difficult issue, but I would say we're winning the conceptual battle at the university level. The individual programs and departments still may find that they don't value that enough.

It is the Dean's responsibility to have conversations that are organized around the question of what is true scholarship, what's the role of a college of education, and what can be done to move those attitudes to be much more inclusive. Those don't take resources, but they do take some changes in people's thinking. We need to keep working on this.

Audience: Along these same lines, when you talk about educational reform, you're talking about having to have some funds to do so. On these campuses now, Grambling is no exception, all you're going to hear is that nursing is high cost and high priority, or that the sciences have high priority. You never hear that education and preparation of teachers are both high priorities. This, too, will take a mindset kind of change that we're going to need. It's going to have to take place not only at the state level, but also in central administration. We in the college of education should not have to fight and scramble for dollars. People must begin to understand that the profession of teaching is extremely important. Yes, it will cost some money, but we ought to be willing to invest some money in this profession.

Wimpelberg: At the University of New Orleans we have been discussing the restructuring of the college of education. Although money has certainly been one of the issues brought up, it has also been brought up that there are some things that we can do with what we already have. The other thing that should be mentioned is that we need to stop thinking about ourselves as teachers of reading, math, curriculum instruction, or the like. We need to emphasize, as this conference is doing, that we are in this business for all of the children. We need to stop compartmentalizing ourselves and present a common front if we want to achieve reform.

Audience: I believe that having a strong message sent down from the Commissioner of Higher Education that professional development toward reform for all teachers in colleges of education is a must, would make a difference.

Audience: I want to try and draw a parallel between some things that were talked about at lunch and what I'm hearing in here. We heard a lot at lunch about how accountability has become the beast that's driving the machine and that's what teachers are concerned about. I see that the Board of Regents has become interested in teacher education and has announced that for the first time in twenty years is going to take a look at teacher education programs. I don't want you to become the beast, but I do want you to think very carefully what you tell us you want us to look at. That will be your declaration of what's important in the preparation of teaching. I also understand that historically, second only to the college of liberal arts, the college of education is a cash cow. We make money. I also know from a personal experience that for every dollar given me, I can turn back roughly three. Now, with the new model it might only be two, but a 200% profit in any other business is considered pretty good.

Audience: One issue that hasn't been brought out today is resiliency. It has been discussed in terms of the students in k-12 classrooms, but we haven't discussed the resiliency of teachers, especially beginning teachers. As a part of the teacher prep programs, we have to consider what we can do to enhance the resiliency of beginning teachers so that they will be strong enough and well prepared enough to survive those first two or three years.

Audience: I just have to say that that is an issue so dear to my heart. I feel sometimes like I'm leading lambs to slaughter because these young people come to us so wonderful, so obviously choosing meaningful things in life over profits. At LSU we do a wonderful job of putting them in many diverse classrooms as part of their teaching training, either in the four or five year program. But to look at the attrition rate is heartbreaking. I have former students who are embarrassed to tell me that they are leaving, but they always do. Every time this happens I wonder what we have not done to create or enhance resiliency in these individuals. I have tried in a minor ways to look at wellness training in my classroom, referring people to the wellness center at the university for support in either substance problems or personal problems. If we don't look at teacher wellness nationally, we are missing the boat. It's already tough enough to feel that you're in a position to be sued or to be attacked, without also realizing the incredible vulnerability of those who go into the helpful professions and how little we do in our programs to support them. I'd love to know if anyone else thinks that's an important issue.

Speaker:

One thing that's on my mind concerns the issue of redefined roles. We must start to have a much more active involvement with the schools that hire our graduates.

I know that all programs now have students in classrooms early on and in an increasing variety of settings. I'm beginning to think that our new role is to help the schools themselves learn how to help our students make the transition from student to teacher. That means our education administration programs should be on board to talk about school leadership and our faculty and administrators should be in schools to talk about the lives of teachers. It also means that school principals should work with us to talk about what it means to be a school principal, and teachers in the schools should talk to the students about what it means to prepare to be a teacher. What I am really saying is that there must be a greater collaboration between the colleges of education and the administration and teachers of the receiving schools.

Audience:

To add to what was just said, not only does that have to be mentioned, but I think we also need to address what approach we need to take when we go and make those connections with the schools. I think a lot of times, too often, we're perceived as the person whose coming down to the schools to dictate what they should do, and too often we actually do this. We must develop partnerships with schools. This is really faculty redevelopment, because a lot of our education faculty needs to be retrained on how to approach schools. At the same time, the receiving school's faculty needs to be retrained to understand that they have a contribution to make to the colleges and universities. It should be a true partnership. It should not be a one-way street. We have to work very hard on projecting that type of image, and it all goes back to changing attitudes.

Audience:

To add to what was just said, a part of the team has to be the pre-serviced student. I've been following a small number of students now from pre-service training to student teaching and through teaching, going in with the idea that we were going to be looking at what made them more effective teachers. What kept hitting me in the face over and over again was how significant school culture was on those young teachers. So often they go out there with good teaching skills, but what keeps coming up is that they are isolated in those schools. They are not made to be part of that school's team, yet they have good credentials to offer. Often they go out with what would be considered best practice teaching skills and ideas, but they find themselves in conflict with those who want to continue to teach in the "old ways." Consequently, they are not made to feel welcome, and they are frequently looked upon as the young upstart from the university education system who is trying to tell us that we should be teaching in a different way. Local education systems and training groups need to address this problem.

Audience: It really comes down to the fact that we must do a better public relations job with the experienced teachers. We need to convince them that the learning process can be reciprocal. This is a very difficult message to get to classroom teachers, as well as teachers in educational programs, who for years have been compartmentalized in what they do.

Gorrel: There are a number of places you might want to look at if you're really interested in this that are doing things along those lines. I would suggest looking at what Indiana University is doing with their community of teachers that pulls professors, students and teachers in the schools together in a very interactive way at the very beginning of the student's experience. Look at what the University of Cincinnati is doing with its mentorship teams and its leadership teams. Look at what is happening in Los Angeles, where professors from the university level are getting pulled into the schools to work with teachers in a mentoring fashion and to work in teams with the students from their schools. This is starting to affect the teacher education programs in a very positive way. The University of Colorado at Denver would be another one to look at. There are dozens of examples, and if you're not aware of those places, it would be really good to track down some and find out how they're doing it and how you can modify their approach to fit what you want to accomplish.

Audience: I think confession is probably pretty good for the soul, and I speak as a former high school principal, junior high school principal, and now as a central office administrator. As principals, we set our beginning teachers up for failure. There's something inherent about a right of passage, kind of like tenure I guess with the university. We give our beginning teachers that you're talking about the kids who are experiencing the most difficulty, the most difficult courses, and probably three to five preparations, as opposed to that veteran teacher who will probably have one. To compound the problem, I know that in my parish I am sending these inexperienced teachers to schools where the building level principals have less than five years experience as an administrator. What I am getting at is that those who make the decisions as to where new teachers are sent should collaborate with the lower echelons before making these decisions. Sometimes it is a matter of getting connected to the real world and to what really exists out there. I know of one university professor who realized that he had lost touch with the real world and volunteered for a time at my high school. When he went back to the university, he could speak in a much more authoritative way concerning real issues in the schools.

Audience:

We have people in the college of education who have never taught an integrated class who are teaching students that are going into an integrative classroom. They do not understand cultural diversity or any of the other ramifications involved in teaching in such a situation. How can they then properly prepare others to enter this scenario?

Wimpelberg:

BESE (Board of Elementary and Secondary Education) has assumed most of the responsibility for what we do in colleges of education leading to certification and what happens in schools and how they're structured. While BESE and Regents have met together, I think by rule or by policy, the Board of Regents has generally said, "Well, we'll take teacher education in account among all the things that we are responsible for in all three systems." What is really wonderful about our meeting here is that it's the result of Regents and legislative action saying we want to have a point at which Regents can focus specifically on teacher education. I think we're lucky to have CDL available and ready, but I can tell you, if it weren't this year that CDL were going to hold Plain Talk, Regents would have designed something with us and for us. I just want you to know that. There is a commitment behind this effort. The fact that we're in this room right now having this discussion is because things are different.

Audience:

Does the commitment involve the rank and file teacher education faculty? Again, I go back to the fact that they need to have incentives to be brought to the table or they need to have mandates. I don't like mandates, but sometimes I think they're necessary. The rank and file faculty need to have some kind of incentives to sit down with K through 12 people and say, "Look, how can we work on this problem together?" It should also go along with the promotion in universities. There's no incentive for a faculty member who has tenure to go back and sit down with K through 12 people. Why should they do it? I think that needs to be brought out. That needs to be looked at really closely.

Audience:

One of the things that bothers me is I looked and studied education in Louisiana, and maybe it's better than I think. But I think we're partly responsible for how the kids are changing. I don't think we have all the answers. I'm not even too sure we know what questions we ought to be asking. But I know that whatever we do, we need to take a new look at the research and implement things that have a research base that we know affects students' achievement. I'm not too sure we always do that, and I'm not too sure that the students we put out in the schools as interns or student teachers are always using best practices. This really concerns me. I don't know what the answer is, but this is a concern of mine, that we don't always train our students to do the very best that they can. I see us just continuing to kind of stay in the same place if we don't take some initiative to change this.

Audience:

Getting back to the point about the rank and file faculty, I absolutely agree that we need to sit down in partnerships with other educators, teachers, and principals, and I believe I stated before that we need more in the line of communication there. However, all of us at the university are on a number of committees. We also have huge class loads. Many of us complain that we don't have any time for research. If you take on grant project money, you are directing grants and getting no load credit for it. We do all kinds of things, like direct master's degrees that we get no load for. We take on activity after activity. I can guarantee that if you were to say, "Here's another thing you have to do," even though people would generally agree it would be a good idea, they would say then that you have to change your perception of my role at the university. You have to perceive me as someone whose time would be valued if I were going out into the schools and I was spending more time working with my own students out there. If this actually became an important agenda in the college of education then, yes, most of us would probably want to do that. But if you just threw it on top of everything else like this is another job you have to do, I predict full-scale rebellion.

Audience:

There's the push to improve quality, but at the same time there's a competing push to improve quantity. In the terms of field experience, which was just being discussed, we do want our students to see best practices. At the same time, we are saying that we need more and more of our students out in the field earlier and earlier. Unfortunately, there are a limited number of schools and classrooms where we can find best practice. In the New Orleans area, there are seven universities that teach potential educators and compete for the very same classroom. In addition, let's add the 60-70 students who are in reading, writing and language arts blocks, and find them classrooms for best practices as well as the additional 50 students in math methods. I can see that as we push for quantity in field experiences, we have to be very careful that we don't ignore the quality of those experiences, because then I don't think that the students would be better off for having been out in schools where they see inferior practices. In some cases one of the things we have to work with is the real diversity issue. Our students vary in negative perceptions of minority, poor, and sick children. What I want to try to do is dispel some of the stereotypes that they go into classrooms with. So, there are all of those issues to consider with field experience. There are no easy answers.

Audience:

If we do math, science, social studies, reading, and language arts methods in student teaching, we need about 250 placements a semester. And by the way, where do I take these people during summer session, or do you not want me to teach those people during the summer? Where am I going to put an additional 250 service teachers who want to go to the university during the summer?

Audience: Are the university students year-round students? Our elementary version is year round. We don't do a full program in the summer, but we can still offer some of the elective courses so that there are some spots for student teachers.

Speaker: Actually, our resolutions aren't in finding answers to each of these questions. We're posing the larger framework issues, right? One of the things on my mind is that we have committees in departments. We're large enough to have four departments and each department has its own teacher education committee. We said we've got to pull the discussion together across departments. So a couple of years ago we created a teacher education council with folks from all four departments. Then we got busy in grant work and most of the people on that council are retooling in technology and doing a variety of other things. The council didn't meet for a while, and an ad hoc group got together just recently and said we can't let this larger design thing die. What keeps coming back to us, though, is that we want to envision the state of the world we'd like to achieve. And we're slowly playing that out, both from a knowledge base to real classrooms we know. We'd like to envision a world that we'd love to have. At the same time, we can't stop and go there, because we've got to keep doing it the way we're doing it now as well. And then, in the short term, the certification rules change very specific things that we must respond to. So, for me, one of the worlds that we simply have to get used to and figure out and during which we have to save time and energy for envisioning the way we'd like it to be is a very complicated and busy place. That's a reality for us and I suspect for everybody else.

Audience: One of the reform areas that has been mentioned is that schools should be able to abandon the whole notion of having to follow a set number of courses. There would have to be a set orientation to certify teachers, but then the schools could design anything that made sense as long as they could demonstrate that students left the program with certain proficiencies, competencies and so on. Is there any talk at all about this? It seems that the reformative thing has always been course space. We need to have a course in reading; we need to take away a course in reading.

Wimpelberg: That is changing. In fact, I spent 25 hours in the State Department of Education last week in connection with various groups who comprise a Blue Ribbon Commission. One of the issues involves establishing what a teacher needs to know and what students need to know, both to be successful. It is felt that there should also be similar standards for higher education. These should be standards rather than a course. I believe that there is activity on that notion from the State Department of Education.

CHAPTER TWENTY FOUR

Wimpelberg: At the risk of frustrating everybody, we're going to call this part of the discussion to a halt for the moment. Commissioner Savoie would like to make a couple of comments now.

Savoie: Let me personally thank you for being here and for your active participation and your full participation. I saw people at every session, and I saw you engaging and having conversation with one another. Frankly, that's one of the things that we hoped would have come out of this conference. Secondly, I think that I've heard at least a couple of themes that give me some direction. We need to stress the importance of the work that you do on all the other reform and issues that the state has. If we don't do a good job here in the preparation of teachers, a lot of the other things that we're hoping will work won't work. So we need to emphasize what you do much more publicly, and we'll do that. Coincidentally, we are now reviewing our funding formula and so there are some opportunities maybe to emphasize some of your needs and the value of what you do on some sort of financial support. We are also developing a series of performance incentive funding elements that you may have heard something about. We are looking at performance elements that will drive improvement and that will help people identify deficiencies and reward them for identifying and making improvements. What we are pursuing is encouragement, not the embarrassment model. But we can clearly place financial incentives up for institutions to take what you do more seriously. I'm not sure exactly how, but we'll get that done.

There are a couple of things that came up about which I'm not sure what to do. I want your feedback in the last few minutes if we could. A couple things it seems became very apparent to me in the discussions from the last few days. The first day when we had the general session here, several teachers got up with the same message. "We're not prepared to deal with the realities of our classrooms. We're not sure how to deal with these situations." Well, where are they supposed to be prepared? They're supposed to be prepared in our colleges of education. So, we've got to look at what we're doing. What are those areas that they're not prepared for, and what are we going to do about it to help them prepare? Secondly, I'm really concerned down the road as the new high stakes tests begin to be implemented. We've heard the discussions the last couple of days about the different types of intelligence and that there ought to be multiple ways to instruct and to test that. The problem is that we're focused on one type of standard, very rigid model. What are we going to do with all those kids who bust out on their tests? What are we going to do about it? Now, I think that no one's going to do anything about it except us, because no one has the capabilities to provide any direction except us. What other methodologies could we be providing our teachers so they can identify early the deficiencies the children have as they relate to these standardized high stakes tests, and how are we going to help them to deal with that? We've got to think about that. Luckily or unluckily, we've got about a year or so to develop some responses. Through this center's money, we will be very happy to help support some efforts in that regard. There are many children in Louisiana who are about to be pushed over the cliff, and we have the responsibility to try to stop that if we can. It's not going to do us any good to put them in summer school and get them remediated by the same people who taught them to flunk in the first place. You know, it's a comment that I heard earlier that I can't take full credit for, but I repeat it over and over. We've got to do something about that. This is the core that can do it for Louisiana. There is no one else. BESE will go down fighting Custer's last stand over that accountability plan. They are just stretched out too much in public exposure to it. The legislature will demand it because accountability is what all the legislators are involved with around the country now. We're the ones that have to respond. So if you have any quick reactions to that, I'd like to hear them. If not, write them down and send them to me, and then we'll be sending out some more communications after that. Again, thank you all for what you do, and thank you for being here and for planning some attractive roles in this effort that tries to improve our teacher preparation program.

Wimpelberg:

Responses to the Commissioner's question and comment and/or what'll we do next? Either domain.

Audience:

Unfortunately, Commissioner, I don't think we have a quick response. There should be an effort to get us back together where that is what we're thinking about. We're pulling and we're bouncing off each other, brainstorming solutions. I don't think there are any quick fixes.

Audience:

The other thing is just collaboration. We're going to be in the throes of trying to look at competencies and trying to integrate them so that we don't need 250 placements for our students for all our methods courses. We're going to say they need this competency whether they're in the art methods, the math methods, or the language arts methods. It's one class placement. So, finding out what's already being done before we all just burst into 150 different directions and try to reinvent the wheel is extremely important. What's working, and what's not? There are some good things going on in the state, and we can help each other. That has not always been happening in the past. The Board of Regents is anticipating doing this again in the future and possibly funding our message this session. They should require that at least one high-ranking university official attend as well.

Savoie:

Dr. Hargrave has an almost monthly meeting of the chief academic officers of all the institutions, and she could place this on their agenda for the next meeting. Seriously, we are addressing this issue now in a big way.

Audience:

Is it just for this session or were they the missing link for the last three days?

Savoie:

You know, we had a conversation about that, and I really didn't want them here because I didn't want you to be intimidated. I really wanted you to have this conversation without worrying about how they were going to respond. I'll be your advocate with them. Don't worry about that.

Audience:

I am confused about what I am supposed to be doing about reading instruction. It is the whole phonics/whole language debate. What is it I am supposed to be doing now?

Wimpelberg:

Good question. There's a specific response to that which most of the reading folks know. BESE is very concerned that we teach what we are now calling a "balanced curriculum related to reading" and balanced means between code-based and meaning-based. The Council of Deans, the Louisiana Association of Colleges for Teacher Education is formulating a response to help us "audit" our reading program. They are creating a matrix so that we can look at our reading programs on every campus and see to what extent we could argue there is balance or not.

Audience:

I have an answer for the confusion about reading instruction. The question was raised as to a balance in reading programs and the answer that was synthesized from several answers that were given was that the balance should be student-specific.

Wimpelberg:

The criticism as you know, warranted or otherwise, is that some of our programs have gone so heavily into whole language that we cannot prepare teachers to respond that way in the code type. I'm not sure that's true. We haven't done the assessment yet to know, but that's the perception. But that's a very good way to reframe it. Every teacher should be able to respond to a given student.

Audience:

I want to go back to something that the Commissioner said about addressing the needs of students who are not going to be successful with the high stakes testing. When we have that discussion we need to have K-12 teachers at the table to take part in that discussion, because if they are not there, we will not be able to come up with viable solutions.

Audience:

I taught kindergarten for a number of years and now I'm at the college level. I have found that no matter what level I'm teaching, the most important thing to remember is that I'm teaching children. I'm teaching people. I'm not teaching matter. There is no doubt that you also must know the subject matter. But, equally as important, and maybe more so, I need to know about people and I need to know about the children I'm teaching. There's no program in the world that I can teach the students in teacher education class that they can then take and be able to teach every child that comes across. There is no such preference. Nor should there be. But if I can learn how to reach the children in my class, and I know that there are different programs out there, then it becomes my responsibility as a teacher to find and understand that program. We can't possibly in teacher education teach every reading program, every math program. But we can teach them how to work with children, and we can teach them about supplemental stages. We can teach them about how children learn. We need to teach them about all the latest brain research and everything that we can get our hands on like that, and then let them know about the wide variety of methods and programs that are out there from which they can choose.

Audience: We also need to keep in mind that we are not preparing our students for just one region or one district. They are going to go out all over Louisiana, Texas, and elsewhere.

Audience: For all the years that I have been involved in education, I have not heard so many people so willingly and emotionally express their concerns for the improvement of teacher education and for education in general. I just want to see us really collaborate with BESE's staff and board, and I think we will see a real need for reforming this state. It's going to take all of us, pre-school through the college level, to really make a difference.

Wimpelberg: It's perfect that one of our Regents makes the last comment and the comment of that quality. Thank you very much. Thank you all.

CHAPTER TWENTY FIVE

"So What's Worth Fighting For in Education?"

Moderator

MICHAEL FULLAN, PH.D.
Dean
Ontario Institute for Studies in Education (OISE)
University of Toronto

Panel Members

ANNE HENDERSON
Education Policy Consultant
Center for Law Education
Washington, D.C.
Instutute for Education and
Social Policy, NY University

CHARLES I. BERLIN, PH.D.
Director,
Kresge Hearing Research Lab
Louisiana Medical School
New Orleans, Louisiana

CAROL ROLHEISER, PH.D.
Associate Chair,
Department of Curriculum,
Teaching and Learning
Ontario Institute for Studies in Ed.
University of Toronto

PRISCILLA VAIL
Learning Specialist
Bedford, New York

JUDGE DAVID ADMIRE
King County District Court
Redmond, Washington

CHARLES ACHILLES, ED. D.
Professor of Educational Leadership
Eastern Michigan University
President,
National Council of Professors of
Educational Administration

ROBERT BROOKS, PH.D.
Faculty, Harvard Medical School
Former Director,
Department of Psychology
McLean Hospital

JEFFREY GORRELL, PH.D.
Associate Dean of Research and
Graduate Studies,
College of Education
Auburn University

EMERSON DICKMAN, III, ESQ.
Attorney at Law
Maywood, New Jersey

Fullan: In terms of what's worth fighting for out there, I'm going to ask you to pose the question that is foremost in your mind.

Audience: What can you do when there's parent apathy?

Brooks: I would like not to choose the word apathy. I'll tell you why. It's a good word, but it's like when we say a child is lazy or unmotivated. Most or all children want to learn. They are not lazy. When we use the words apathetic, lazy, or unmotivated we are using words that are accusatory and words that really don't lead us anywhere. When we use the words apathy or lazy, it's more an indication that many of the parents are feeling disempowered, hopeless, and helpless. There is enough research to show that when you feel this way, you can either look apathetic or you can become enraged. So, as a professional who works with many parents, one of the questions I think about when I hear a parent is apathetic is how do I help that parent to feel empowered?

Gorrell: I'd like to respond in a little different way. I think what you have to do is find a reason for the parents to be in that school, and the reason has to respond to their needs. There's an excellent example I saw out in Los Angeles about a year ago in a feeder pattern school. This district has a highly mobile population where the parents are typically not connected to the schools. What the schools have done is that they have started creating conditions in the school that make the parents want to come to that school, including teaching them ESL. English is a second language for the parents who have come from China or from Mexico, and they're getting the parents involved by offering something to them. In turn, a whole group of parents who would normally be called apathetic are interested and involved in what is going on in the school.

Audience: How can we convince the legislature, taxpayers, and administrators, that lowering the class size will produce more positive results?

Achilles: Part of the concern, besides the ideological warfare that's going on, is to show that it's not expensive to reduce class size and that this is not a slight of hand trick. Indeed, we can show the benefits that accrue with reduced class size. Taking a look at the comment about parental involvement, if I'm a teacher with seventeen or eighteen youngsters, I can be in touch with the family or the home much more frequently and in much more meaningful ways than if I have thirty. We know that parental involvement helps student achievement, so we get some benefits there. There are numbers of ways, organizationally and operationally, that we can show that changing class size need not be expensive. I'll give you one or two examples of this and you can think about others. In a small class, a teacher very quickly identifies children who have learning problems. The teacher has to because there are only a few youngsters, and if one isn't doing things right, the teacher can focus on that. The youngster can, after careful diagnosis, then get remedial help. This reduces your special education budget in later years dramatically. You can show that it takes ten thousand dollars to get a student through first grade, but if the student is retained, then it will take twenty thousand dollars to get the student through first grade. So our task is to show people in this discussion that it's not expensive to get class size where teachers can do the work we pay them to do.

Audience: How do you make parents feel welcome to come to the school and volunteer time, and how do you provide activities that they can connect to and be able to do?

Achilles: I want to tell you what one elementary school did that they said worked wonders. The day or two before school began, teachers in this elementary school called every parent, and if there was not a phone, they wrote a note. They spoke to every kid and every parent. What they said to the parents was very interesting. They said, "We're in this together. If at any point during the year there are any questions or whatever, please be sure to contact me or come to the school." They invited them in. They said calling all the parents took one hour of their time, and I said, "Well, what did you learn from this?" They said, "We learned we should have been doing that twenty-five years ago." That one call alone set in motion a situation where parents felt comfortable going to the school. Soon they were helping out, the discipline problems in the school went down within one year, attendance went way up, and achievement scores went up. That was just the start.

Rolheiser: One idea that we work with in the Toronto area where we have a large number of languages being spoken is having translations provided for home-school communication. During the evenings when parents are invited in, we use the children and other adults to provide translation for parents. That is one way of making a very diverse population feel welcome in the school. Again, this is a simple idea, but one that has had an incredibly powerful impact.

Audience: The combination of messages that we are receiving is somewhat confusing. Could you comment on the common features, but also the tensions that arise from all of this?

Vail: I'd like to very much. I think it's been wonderful that we have talked about connections and we've talked about empowerment and we've talked about becoming energized. But, I would like to introduce a word of caution here. Different learners won't take off in learning unless they are also appropriately taught. In addition to being energized, reached emotionally, and connected with, they need to have appropriate teaching and they need to be taught reading all the way through school. I would like to present one very brief anecdote. I was once invited by a seventeen-year-old boy into his room to see his Greatful Dead records. Best invitation you'll ever have. We were chatting, and he was showing me the record jackets. Then he said, "But I've never understood what these words meant." And he pointed to three little gold words at the bottom of the label. The words were all rights reserved. I said, "What do you think it says?" He said, "It says, *all rights reversed*." I thought to myself, you've asked the most profound question. Are you saying all rights? All letters that face to the right for you are reversed? And then on the next level are you saying all rights, as in your rights to the kingdom and power and majesty and beauty of the world that lie in print? Those rights for dyslexics and different learners are often reversed in the judicial sense. In other words, denied. Those rights will continue to be denied until and unless kids get the teaching that matches their needs. Free-floating benevolence doesn't do the trick.

Fullan: Remember my comment this morning about gurus and charlatans? I said it facetiously. However, I think the other side of this is that people at the conference, I'll call them the thinking professionals, the interested parties, really have to take the messages not literally, but have to kind of process them and grapple with them and say, "What makes sense in these? What am I looking for in my own situation?" Then test the inconsistencies, but also look for the clarity in your own internal thinking, stimulated by a lot of ideas.

Fullan: Carol, what's the key idea, the leverage point, that's most important in educational reform for you?

Rolheiser: One of the questions that Alice Thomas asked us is, "What's worth fighting for as we think about the end of this conference?" For me, I guess the key message from Plain Talk, is that change is about individual and collective change agents. It's about the day-to-day actions and steps that all of us take to act with purpose and to act with passion. When we take those actions, change occurs. So for me, when I think about what I can do on a day-to-day basis to make a difference, I've had to make choices. There have been five areas that I've chosen to put my passions and energies into. The first is teacher education reform, and this has been a very consistent message throughout the conference. Investment in our children means investment in our teachers. We in colleges of education need to look at ourselves very carefully. We need to change ourselves in order to impact the teachers in our profession. I want to be able to look at teacher education reform to say, "I as a teacher educator need to care about teacher development in school improvement, but it's a partnership." I also need to know that the teachers that we work with and schools that we work with care about teacher education reform. So the partnership has two sides to it. The second area is to embrace the knowledge of our profession. This conference has been about sharing our collective wisdom. We need to utilize the knowledge and we need to add to that knowledge base. That means going back to your classroom and your school, carrying out action research, playing with those questions and sharing your findings with others. The third one for me is engaging students as partners. How do we ultimately look at the key person that we need to be working with, namely every child in our classroom? Bob Brooks said it, I believe, quite powerfully when he asked, "What is within our control?" The instructional and assessment practices that we use on a day-to-day basis and our humanity are within our control. We need to go from accusation and blame to saying, "What is the responsibility that I can carry with me day to day?" The fourth one concerns Michael's message this morning. We need to be able to understand and manage change if we want to see good ideas spread. The last one, and the nugget of this conference, has been how do we establish collaborative environments? This includes the classroom where we become grounded in practices such as cooperative learning, schools where we work on developing collaborative work environments, and professional learning environments and community practices grounded in partnerships like CDL, where we're bringing together diverse and interested parties. All of this is to say that each of us will make decisions and those decisions, when combined together with our collective vision, will result in incredible energy and positive change. So I wish us all well in that endeavor.

Henderson:

The wonderful thing for me about this meeting has been the kind of harmonic convergence of all the ideas and the way they've all come together. They resonate particularly for me because I often come to things like this as something of an outsider. What I'm preaching is for schools to really open up in a big way to their families and their communities. I want them to become a part of their communities and to help reconstruct the conditions that lead to healthy, trusting, productive relationships between the school and its families, teachers, and students. I want all of this to come together in something that looks like a true learning community. The research that I've been tracking for years on the relationship between engaging parents and improving student achievement at this point has accumulated into a great mass of stuff that all points in the same direction. What it says is that when schools reach out to families and help them connect to their children's learning and to their children's school, children do better in school and the schools get better as a result. I think that's something we can't ever forget because all of this huge enterprise in education reform that we've been engaged in is not going far enough or fast enough. There are still thousands of children falling in the cracks every day. We're still throwing away one third of our kids every year and it must stop. The only way this is going to happen is if parents and the community basically rise up and say, "You are answerable to us. We must all do this together." It's not going to happen unless the school community congeals into a place where everybody is committed to doing whatever it takes to make sure that every single child gets the education he deserves. Parents have to understand what the standards are, what the scoring guides are, how to learn to look at student work and how to understand the language that the teachers are using.

If they can't understand it, believe me, their kids aren't going to understand it. I think that when I go out and talk to schools about this, one of the things that they say to me after they have opened up to families is, first of all, how much more enjoyable their job has become because they've gotten this support from the community. But they also say that explaining to parents what they are doing helps them to understand what they are doing as well. It forces everyone to have that kind of lateral accountability that Michael was talking about earlier where we're becoming accountable to the people who most matter to us and the people who can make the most difference for kids.

Fullan: Criticism from the outside (the media, politicians, the general public) has become increasingly specific and explicit in a language and in examples. That is, the criticism system has gotten better as a criticism system. In the meantime, if teachers are not able to explain themselves clearly, then that's where they get into trouble. So one of the by-products of the professional learning community is that it literally increases the capacity for the teachers to know what they're doing and to be able to explain it. That's a political value as well as another kind of value. If you can't explain it, then that's where you get into deep trouble. If you can't explain it, you tend to back off criticism. If you can explain it, you reach out. That's why every time we find professional learning communities reaching out to the community, they're fairly confident in that relationship. The individualistic cultures pull back because they are not confident.

Gorrell: What's really worth working on very strongly is collaboration and partnership. I've been talking a lot in the last three days about the improvement and reform of teacher education. The most important single way in which that is occurring in some of the best programs in the country is through the creation of true collaborative, integrative, multiple direction partnerships between the universities and the schools, between schools and the students who are coming from the universities, and so on. Now this is starting to transform teacher education and is improving schools at the same time. It leads to very practical relationships. It tends to transform people's ways of thinking. It tends to get us professors out of our buildings on campus and into the schools. It tends to integrate the kinds of things that we know are going on with schools with the kinds of things that our teachers are coming out and needing to be able to know and to do. The kind of collaborations and partnerships I'm talking about are not simply the partnerships that involve a university or college of education partnering with an easy to work with school or an easy to work with setting. A lot of our traditional partnerships have been with those nice schools, the ones that make it easy for our students to go there and easy for us to say, "See, this can work." On our campus, one of the best collaborative partnerships we've got right now is with a very poor rural school in central Alabama that is not accustomed to having people come in and care about them. What's happening, by having our professors and students go out there, is that we're not only helping that school transform, but also we're transforming ways in which we think about our role with the schools. That has to continue, I believe it will continue, and if there were a way that you have of creating those partnerships, I would say go for it and go for it as soon as you can.

Admire: When the schools fail, that's when I become involved and that's when the people come and see me. In my work with all of the defendants that come before me. I have a lot of people ask me, "How many failures have you had?" My response is always the same. "I've had no failures; I've merely had some successes taking a little longer than others." I think it's also applicable what I've said to some people in my system. The judicial system is applicable to the teachers as well as to the school administrators. That is, if you are too callous by what you've seen, or you're too tired, or if you don't care anymore, if you fit in that category, then you simply need to move out of the way for those of us who still care. That's the bottom line.

Brooks:

It's so easy for me to say that I agree with everything that has been said, but why do we do it? Why are we so passionate? I'd like to tell you very quickly about two kids who wrote to me, one who unfortunately failed and is in jail, and the other who made it. As I said at my earlier session about stress hardiness, whenever I get down, the best way I get up again is to read about the children and what we're really all about. The first kid was actually the drawing I showed, the boy who at six years old wrote the word help. It was a drawing I showed you the first day and he was in jail. After he dropped out of school, before he ended up in jail, he wrote something that his mother sent to me and I want to read part of it. "My alarm goes off. I awake to a new day at 7:00 in the morning. I already have a stomach ache, I already have a headache. I say to myself, 'Oh, God, not another day of school.' I'm too sick to eat breakfast. I stand up in the shower saying, 'Maybe it will be a good day.' But deep inside I know it will be exactly the same." That sense of hopelessness and helplessness, and then he says, "In school I'd say I retain one-hundredth of the information that I feel is being stuffed in me. I can't take anymore of the reprimands and punishments. That's why I dropped out of school." And then he ended his letter. We have a couple of judges here who have seen kids like that. This mother was crying and she said, "If only I knew more, if only I knew more about kids."

The parents of the second boy, when he was in the fifth grade, were told by a teacher who had not taken my seminar on empathy, "Your son may be salvageable." That was the word, salvageable. Thank God the next year he had some wonderful teachers, and his mother told them about me. As you know, I always love kids to write, and he wrote to me and he said, "Dr. Brooks, I'm writing to you. Would you please read my poem everywhere in the country so people will understand how kids with learning problems feel." His poem is very brief, so I'm just going to read it.

When you're confused you try to hide it because all the other kids get it and you don't.

It's always so frustrating to feel like you're so stupid.

Sometimes you feel like you're in another country and don't speak their language.

That so captures for me what many kids with learning problems feel. We're speaking to them, but they don't hear us. I loved it so much I wrote him a letter. I said, "Ryan, I love your story. I want to read it all over the country, but you do have to sign this permission slip with your parents. So, he does, and back it came by Federal Express along with this note:

Confusion

Dear Dr. Brooks:

How could I say no to you? You gave me a wonderful inspiration. It's an honor to sign the permission slip. It's a once in a lifetime opportunity to have my poem read all over the country.

So I read it all over the country. But I want to read you a follow-up letter that came two years later, because this is what this meeting is all about, having teachers and parents work closely together.

Dear Dr. Brooks:

Sorry I haven't written you in so long. (By the way he's written me constantly, like for six months.) *Dr. Brooks, my mother says you need some pen pals. Don't worry; I'm here for you. Sorry I didn't write you in such a long time, but between catechism class and junior high school, I have been kept so busy. I guess my mom told you that I got straight A's in the first marking period. I suspect I'll get straight A's again. I have a 100% average in history, math and geography.*

Now, not every kid is going to get this. He writes to me constantly. He's an honor student; he shines. He keeps sending me his photos in football uniforms and baseball uniforms. Why do I bring these kids up? One kid ended up in jail. Similar problems, but every kid is different. Another kid is shining. We lose too many kids that we can save. So, I think what this conference to me is all about is the passion and really saving children's lives. Each one of us has to look within ourselves and say, "What is it that we can do differently, even to save one child's life?"

Berlin:

As I told the group I was talking to this morning, my specialty is the science of hearing. As a scientist I work in a laboratory and occasionally get drawn out to see a patient or two. I was honored to have a grandson who couldn't speak or hear clearly. As I grew up with him, he called me *Ratbutt*. Now, you have to understand that Ratbutt sounds a lot like Grandpa to a little kid who cannot hear exactly right. If you say Grandpa fast, it comes out as Ratbutt. So this sweet-faced little boy would come up into my office and say, "O-tay Ratbutt, we dowing to the part and you donna take me home and den we donna make some tookies and take. O-tay?" Now, he's a perfect example of a phonologically unaware child.

He just doesn't quite catch it. It's a genetic problem. His dad has the same problem and one of the things I talked about with my group only brushed on what I'm catching from my colleagues here on the stand. That is, children who have the kinds of problems I deal with, hearing problems, become "dis-attached." They're unattached children. It is very difficult to stay in close, emotional or personal contact with them, unless you look at them or hold them. Among the things I have found is that almost all the language disorders I come into contact with are either aggravated by, or in some cases, caused by attachment disorders.

Then I listen to my colleagues around the room say how "dis-attached" teachers are from parents and parents are from their kids, and it makes me wonder if we haven't a big attachment disorder problem in the larger sense of true commitment to connection. I don't have to tell the parents in the room or the grandparents in the room what genuine connection feels like. You know you're there when your grandchild or child says, "Oh, it's wonderful you're home," and they run up to you and throw their arms around you. Well, a teacher who has the good sense to call up a parent and try to attach to them is touching on making up for an attachment disorder between parents and schools. Having been a parent as well as a scientist, I recall vividly having to take my son out of school because he was in a classroom in which the teacher told him that to disagree with his teacher was an offense against the Lord. This wasn't in a religious school; it was a public school. So I did ask Chuck here, my colleague, whether or not teachers are tested for things like phonologic awareness and certain other awareness precepts. His answer was, "They're not." Now it's kind of important for a scientist who deals in proofs to have some respect for intuition, and one of the things I've learned by listening to teachers, parents and children is that they have an intuition about what's right. One of the intuitions about our whole country and how we interact is that we believe in sales. We believe in advertising, publicizing and enticing people to listen to our way through salesmanship. So the teachers who called the parents were selling. I sell. I see parents and I sell them on the idea that their phonologically disconnected or personally disconnected children are not lost. They are not irretrievable and they're not stupid or lazy, but they have this wiring problem or this ultimate place to go. Now, that kind of selling has to have some research behind it. Obviously one does not want to sell it willy-nilly, but I would urge us all as parents, grandparents and professionals to develop a sense of connection with one another and with the people we serve. When you mention the fact that we have failed to capture the public imagination, I would challenge us to say that we have not been very good salesmen. We have sat there and said, "I'm the teacher here and I'm the professional, and I will tell you what your child will have on his IEP." I can't even begin to tell you the number of IEP meetings I have had to attend on behalf of disenfranchised students.

Anyway, to make a long story short, as a hearing scientist I enjoy the opportunity to tell people about our unique and very narrow niche here. The language and speech that we carry isn't learned without hearing, so it's sort of like a lynch pin. I have left the parents with some ideas of what they can do to make classrooms easier, and I'd like to leave this group with the idea that anything that helps attachment between parents, kids, and schools is a very useful thing.

Achilles:

Carol just said that investment in our children is really an investment in our teachers. I can support that, but I would like to emphasize the investment in the children portion. My argument with Carol is I think we need small classes so her better teachers can teach better. I want to invest in getting those class sizes down so our new high-powered teachers can teach even better. I look at what we're doing as the future, and kids are our future now. You've heard me say that they are our IRA for a better future. Futurists talk about ages. They talk about the agrarian age, the industrial age, the information age. Down the road I hope we're going to have a knowledge age and a wisdom age. I want to think that the wisdom and knowledge age belongs really to education. I want these kids to own the knowledge age and the wisdom age, and I want us to be the ones who can lead them there. But they are going to have to get there in different ways, and we have to allow and help them to do this. It's also a question of scale: small schools, small classes and working with kids one on one. That's the only way we're going to reach their individual differences.

Dickman:

Being last, it's very hard to add to what's already been said, so I'm going to do like they are doing in Star Wars and present a prequel instead of a sequel. I pulled out just a minute ago a statement from the very first section of the Individuals with Disabilities Education Act as it now appears. This is what Congress said: "The Congressional goal for the amended IDEA, Individuals with Disabilities Education Act, is to enable children" and I'm quoting directly now, "to be prepared to lead productive, independent adult lives to the maximum extent possible."

Now, that's what Congress said the law was all about. I find that interesting because it's almost like the Constitution in that it's somewhat flexible, especially considering what I understand a learning difference or a learning disability to be. In other words, the culture and the time in which we live determine a learning difference. It's a deficit in a skill area that is required to enable us to provide for our families, our communities and ourselves successfully. Certainly, what were four hundred years ago on Manhattan Island the skills you needed to provide for your family were very different than the skills you need today. Priscilla Vail has said that we need informed instructors to deliver informed instruction. It's not just enough to provide materials to teachers that are based upon research. It's important to get the training and the passion that is necessary to deliver these materials in a way that is going to be meaningful for the children. Having something on the shelf is no good unless you know how to use it. Right now the emphasis is certainly on reading and reading deficits. This makes a lot of sense, because among the learning disabled population, approximately 80% have language-based disorders. So the focus is on that portion of children that have that kind of difficulty. Obviously reading and getting meaning from print is required at this time and in this culture to be able to obtain knowledge in all other areas. Therefore, informed instruction by informed instructors is absolutely essential.

Fullan:

Alice Thomas, can I ask you to come up here please? I just wanted first to thank the panel for this session. Finally, I want to thank Alice on your behalf. I know you have a lot of other workers around you, but Alice as you probably know, is the driving force for this movement to get us together and to make a lot of things happen. The energy and the momentum to do that are really enormous. This one conference is probably a tip of the iceberg, I'm sure, for what you have to do. It's been a fantastic success, I hope you're proud of it and I hope you do very many more. So thank you very much. Alice, you can have the last word.

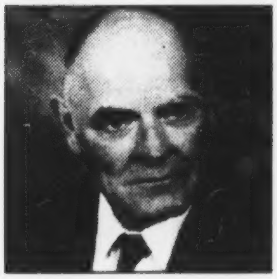
Alice: First, what's worth fighting for, for me and I think for CDL, is that we all become informed. By becoming informed we will more likely come together. Second, I see so many people grappling with how the different parts of this conference connect. So much of what we do in our Western world is put things in boxes and compartmentalize too many times when there are connections that need to be made and need to be up in the front. So if there's one thing I want to fight for and one thing I wish you all would fight for is to keep whatever connections you made this week up front and look for what else you can connect. It's only through connecting the knowledge, the passion, the caring, the expertise and the communities that we will get where we want to go for our children.

Fullan: Thanks very much, it's on to the next parade.

APPENDIX

About the Authors

Charles M. Achilles, Ed.D.



Charles M. Achilles has been a professor of Education leadership and Co-Director of Doctoral Programs in the Department of Leadership and Counseling at the School of Education at Eastern Michigan University since 1994. Dr. Achilles has also served on the faculty in the College of Education at the University of Tennessee at Knoxville. He has a variety of degrees in Classics, Education, and Educational Administration, all from the University of Rochester in New York. He has taught in public and private elementary and secondary school and has administrative experience in public school and higher education. He has additional experience in program development, evaluation, and has contributed to research on topics including class-size, teacher/pupil communications, preparation programs, school effectiveness, and change. He has also worked on school improvement and equity in several states. He is author, co-author, or editor of over 60 books, chapters, monographs or major research reports. He currently has over 350 professional publications in journals.

Dr. Achilles has experience in "effective school" projects in St. Louis and the Knoxville Proficiency Project as an evaluator. He has written a paper for the National Commission on Excellence in Educational Administration and is actively engaged in a study of class size in primary grades and has evaluated a policy implementation of small classes in K-3 in 16 Tennessee counties. He directed a study of "life in a small class," and has conducted class-size studies using the Student Teach Achievement Ratio (STAR) database. Dr. Achilles presently serves as president of the National Council of Professors of Educational Administration. He enjoys research in schools and is particularly interested in how the use of research results can improve the condition and outcomes of formal schooling Dr. Achilles is a member of the CDL Professional Advisory Board.

Judge David Admire

Judge Admire received his Bachelor of Arts from the University of Washington in 1971 and His Juris Doctor from the Catholic University of America in 1974. Following several years as a prosecutor and defense attorney, he was elected District Court Judge at the age of 33 in 1982. As a judge in the Seattle area, his cases often involve alcoholism, chemical addiction, mental health issues, and dual/disease problems. He has developed new and creative sentencing alternatives such as the DUI Victims Panel and the Life Skills program for Attention Deficit Disorder and learning disabled offenders.

Judge Admire is a member of the board of directors of the National Association for Children of Alcoholics and the National Prevention Faculty. He has served as president of the Board of Directors of the Washington State Council on Alcoholism. He has been a speaker at many national, regional, state, and local conferences on alcoholism, chemical addiction and Attention

Deficit Disorder and Learning Disabilities in the criminal justice system. Judge Admire has been an adjunct professor at Seattle University since 1977 where he teaches criminal law, criminal procedure, and the criminal trial perspective.

Judge Admire is married and has two children and two step children. Two of his children suffer from Attention Deficit Disorder and multiple learning disabilities.

Gerard A. Ballanco, M.D., FAAP

Since completion of his pediatric residency in 1974, Gerard "Jerry" Ballanco has been in general pediatric practice with the Rothschild Pediatric Group, now the Rothschild/Oschner Pediatric Clinic. In 1990, Dr. Ballanco completed a mini-fellowship in learning and behavior problems with Mel Levine at the University of North Carolina, Chapel Hill. He has co-authored publication in Pediatrics, Journal of Pediatrics, and Pediatric Infectious Disease Journal. Dr. Ballanco is past chair of the Center for Development and Learning (CDL). He has also served on the professional advisory board of local CHADD chapters and the Board of Directors of the Louisiana Branch of the Orton Dyslexia Society. Forty percent of Dr. Ballanco's practice is devoted to working with children with developmental variation and learning disorders.

Charles I. Berlin, Ph.D.

Recipient of the Presidential Citation, the highest award of the American Academy of Otolaryngology, Charles Berlin is Professor of Otolaryngology and Physiology and Director of the Kresge Hearing Research Laboratory of the South at LSU Medical School in New Orleans. A practicing licensed audiologist who sees patients weekly in the audiology clinic he directs, Dr. Berlin is also the recipient of the Frank J. Kleffner Award for Lifetime Clinical Achievement from American Speech Language and Hearing Association (ASHA) and of the Lifetime Career Research Award from the American Academy of Audiology. A native of Brooklyn, New York, Dr. Berlin Received his Ph. D. from the University of Pittsburgh. He also engaged in special Post-doctoral studies in auditory physiology at the Johns Hopkins Medical Institution. A prolific writer and lecturer, Dr. Berlin has contributed in excess of 100 articles in Hearing, Speech, and Voice, has authored four books and has published numerous reviews and commentaries. An educator, Dr. Berlin has given hundreds of lectures and colloquia, seminars, short courses, symposia, workshops, and scientific exhibits. He has provided numerous educational materials, many of which have become standards over the years.

APPENDIX

Robert D. Brooks, Ph. D.

Robert Brooks serves on the faculty of the Harvard Medical School and is past director of the Department of Psychology at McLean Hospital. He has a part-time private practice in which he sees children, adolescents, adults, and families. Dr. Brooks appears regularly on television shows in the Boston area as well as on national cable television. He recently completed a videotape and educational guide for PBS entitled, "*Now Look What You've Done*!" that focuses on self-esteem, hope and resilience in children with special needs. He is a member of the Professional Advisory Board of the National Center for Learning Disabilities and a member of the CDL Professional Advisory Board. Dr. Brooks received a Gubernatorial Award for Distinguished Public Service for his work with Governors Alliance Against Drugs. Dr. Books also received a Hall of Fame award from the Connecticut Association for Children with Learning Disabilities, for his work with special needs children and adolescents, and the 1991 Special Recognition and Media Award from the Massachusetts Psychological Association. Dr. Books received his doctorate in clinical psychology from Clark University and did additional training at the University of Colorado Medical School. He has co-authored a book titled *A Pediatric Approach to Learning Disorders* and published a number of articles and book chapters related to self-esteem, education, psychological assessment, and psychotherapy. Dr. Brooks has also written a sex education book for the young child entitled, *So That's How I Was Born!* as well as numerous books and articles on strategies to work the angry and resistant children, including his book *The Self-Esteem Teacher*. Dr. Books is nationally and international known for his informative, entertaining, and inspiring presentation.

Katharine Butler, Ph.D.

Dr. Katharine Butler holds a Ph.D. in Hearing and Speech Science from Michigan State University, and a B.A. and M.A. from Western Michigan. She is a Research Professor in Communication Sciences and Disorders at Syracuse University, New York, where she is director of the Center for Language Research in the School of Educational Research on Dyslexia in the Division of Special Education and Rehabilitation Services at San Jose State University.

Elected twice as the president of the American Speech-Language-Hearing Association, she is a former president of the International Association of Logopedics and Phoniatrics. Dr. Butler is a member of the CDL Professional Advisory Board.

A prolific author, she has more than 175 publications, including several books, to her credit. Her recent literary contributions include *Building Early Intervention Teams: Working Together for Children and Families* (Aspen Publishers, 1997), *Learning Disabilities in School-Aged Children and Adolescents* (Allyn & Bacon, 1994), co-authored and edited with Dr. Geraldine Wallach. She is senior editor of *Topics in Language Disorders* (Aspen Publishers), a quarterly interdisciplinary journal, now in its 15th year and a book series entitled *Excellence in Practice* (Aspen Publishers).

APPENDIX

G. Emerson Dickman, III Esq.

Emerson Dickman is an attorney who, for nineteen years, has specialized in the representation of children with disabilities and their families, including advocacy and special needs planning. Among the cases he has handled are New Jersey's leading precedent protecting the due process rights of pupils in special education in 1989, and the leading precedent declaring and protecting the constitutional rights of adults with developmental disabilities in 1993. He is a member of the Board of Directors of the International Dyslexia Association, the Professional Advisory Board for the National Center for Learning Disabilities, the CDL Professional Advisory Board, the Government Affairs Committee Chairman of the New Jersey Arc, and a Board member of the NJP&A, Inc., recently designated by Governor Whitman as the protection and advocacy system for the State of New Jersey.

Published articles include, *"Success & Happiness: A Goal for All Children"* in the Exceptional Parent, *"Adoptee's Among Students with Disabilities"* in the journal of Learning Disabilities, and *"Inclusion: A Storm Sometimes Brings Relief"* in Perspectives. He has been the recipient of several awards for his work in the disabilities field.

Michael Fullan, Ph. D.

Michael Fullan is an international leader in the field of school change. He is the Dean of The Ontario Institute for Studies in Education at the University of Toronto and Policy Implementation advisor to the Minister of Education and Training (Ontario) on the Report of the Royal Commission on Learning. Dr. Fullan has authored numerous books on school change, including *The New Meaning of Educational Change* (1991), *Change Forces: Probing the Depths of Educational Reform* (1993), *What's Worth Fighting For in the Principalship?* (1997, 2nd ed.), *Leadership for Change in Colleges of Education* (1998), and co-authored with Andy Hargreaves *What's Worth Fighting For in Your School?* (1991), and *What's Worth Fighting for out There?* (1998). His most current book is *Change Forces: The Sequel* (1999). Dr. Fullan is a member of the editorial group on several professional journals, including the *American Educational Research Journal*, the *American Journal of Education*, the *Canadian Journal of Education*, *Education Administration Quarterly*, and *School Effectiveness and School Improvement*. His awards include the 1995 Contribution to Staff Development Award from the National Staff Development Council and the Canadian Association of Teacher Educators Award of Excellence in 1990. Dr. Fullan is a member of the CDL Professional Advisory Board. Michael is married to Wendy Marshall and has five children. In the summer, Michael, Wendy and the kids spend most weekends at their cottage, a couple hours outside of Toronto. These retreats give him the opportunity to concentrate on his writing, something from which he gets considerable satisfaction.

APPENDIX

Jeffery Gorrell, Ph.D.

Dr. Gorrell is Professor of educational psychology and Associate Dean for Research and Graduate Studies in the College of Education at Auburn University. He has conducted cross-cultural studies on children's memory and metamemory development, children's development of learning strategies, and children's self-regulation activity in problem solving in and out of school. These studies, conducted in Korea, Sri Lanka, and the USA focus upon children as active constructors of knowledge and meaning. In 1987, he was a Fulbright Scholar to Sri Lanka. Other research studies, conducted primarily in the USA, have concentrated upon pre-service and in-service teachers' social cognition (i.e., self-efficacy beliefs, cognitive modeling processes and perceived stress) as elements of their professional development.

He has published two books and over 40 articles, and presented over 80 papers on topics related to cognitive development, cognition in learning, self-efficacy, self-regulation, international education, and other subjects related to psychology and education. In addition to serving as reviewer for major professional journals in education, he is editor of the *Professional Educator*, a professional journal that publishes research related to teaching practice and the professional development of teachers. He is a member of the CDL Professional Advisory Board.

Edward M. Hallowell, M. D.

Dr. Ned Hallowell is a nationally known speaker, author, child and adult psychiatrist, practicing in Cambridge and Concord, Massachusetts. A graduate of Harvard College and Tulane Medical School, Dr. Hallowell did his residency in psychiatry at the Massachusetts Mental Health Center, followed by a fellowship in Child Psychiatry. He is currently an instructor in psychiatry at the Harvard Medical School. Since the completion of his training, Dr. Hallowell has specialized in the treatment of learning disabilities and attention deficit disorder. He co-authored two best-selling books with John Ratey, M.D. on the subject, *Driven to Distraction* (1995) and *Answers to Distraction* (1995). Dr. Hallowell also has specialized in school consultation and has consulted to numerous schools both locally and nationally. He has written widely about childhood and co-authored a book with Michael Thompson entitled *Finding the Heart of the Child: Essays on Children, Families, and Schools*. Other recent books by Dr. Hallowell are *Worry: Controlling It and Using It Wisely* (1997) and *When You Worry About the Child You Love: Emotional and Learning Problems in Children* (1996). He is frequently seen on such television shows as *Good Morning America, Oprah, Today, and 20/20.* Dr. Hallowell is the founder and director of the Hallowell Center for Cognitive and Emotional Health, a center in Concord, MA, specializing in the diagnosis and treatment of learning and attentional problems in children and adults. He conducts private practice in Cambridge. He is a member of the CDL Professional Advisory Board. Ned is married to Sue George Hallowell, a psychiatric social worker who also has a private practice in Cambridge. Ned and Sue live in Arlington, MA with their three children, Lucy, Jack and Tucker.

APPENDIX

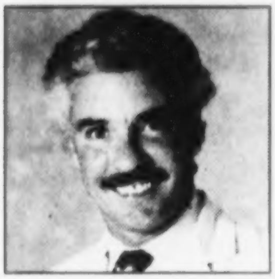
Anne T. Henderson

Anne Henderson consults for school districts, national and state organizations, foundations and research associations on programs, projects and studies related in involving families and improving student achievement. Her special interest is building collaborations between schools and the community. Some current assignments include helping to develop the curriculum for the Commonwealth Institute for Parent Leadership in Kentucky, working with school districts engaged in middle grades reform, and developing a set of tools on involving families in school reform. Based in Washington, D.C., she is affiliated with the Institute for Education and Social Policy at New York University. Henderson is the author or co-author of many books, articles, guides and other materials on building closer relationships between schools and families to improve student achievement, including *A New Generation of Evidence: The Family is Critical to Student Achievement* (1994), *Learning from Others: Good Programs and Successful Campaigns* (1996), *Parents Are Powerful* (1996), and *Urgent Message* (1997).

Susan Holman, M.F.A.

Susan Holman is CDL's Learning Connections SmartArt Coordinator. She holds a Master of Fine Arts degree from Tulane University. Her professional career includes experience as a fine artist and an art educator. Susan has taught in the talented visual arts program in Orleans Parish for eleven years and is a licensed state evaluator for the arts. She was one of six recipients in the country to receive a National Arts and Entertainment Television Network teacher grant. The Holocaust Museum in Washington, D.C., selected her students' work to represent the wall of remembrance in its memorial education book. Her school's art program has been awarded the J. Paul Getty/Annenberg Foundation for the Arts award. As a fine artist, Ms. Holman's work has been exhibited both locally and nationally in museums, galleries, and judged competitions, and has been featured in the New Orleans Art Review Journal of Criticism.

G. Reid Lyon, Ph.D.



Reid Lyon is a psychologist and Director of Research of Programs in Learning Disabilities, Language Disorders, and Disorders of Attention at the National Institute of Child Health and Human Development at the NIH. He is responsible for the direction, development and management of research programs in learning disabilities, dyslexia, language disorders and disorders of attention. Dr. Lyon is also responsible for translating scientific discoveries relative to children with learning disabilities to the U.S. Congress. Dr. Lyon earned his doctorate with concentrations in neuropsychology and special education at the University of New Mexico.

Dr. Lyon has authored, co-authored and edited over 75 journal articles, books and book chapters addressing learning differences and disabilities in children. He has served, or is presently serving on the editorial boards of the *Journal of Learning Disabilities, The Clinical Neuropsychologist, Learning Disabilities Quarterly, Learning Disabilities Research and Practice, Journal of Consulting and Clinical Psychology, Learning differences, Development Neuropsychology,* and *The Journal of Experimental and Clinical Neuropsychology.*

He has served on the faculties of Northwestern University and the Medical College of the University of Alabama. He is a fellow of the Academy for Research in Learning Disabilities. He is past Chairman of the Division for Learning Disabilities within the Council for Exceptional Children.

APPENDIX

Carol Rolheiser, Ph.D.

Carol Rolheiser is an Associate Professor and the Associate Chair of the Curriculum, Teaching Learning Department at the Ontario Institute for Studies in Education (OISE) of the University of Toronto. A committed leader in school district/university partnerships, Dr. Rolheiser concentrates on both teacher development and school improvement. Her previous experience includes work as an elementary school teacher, district consultant, and school administrator. Carol's work in instructional and assessment innovation and teacher education reform is reflected in a range of publications, including co-authoring *Cooperative Learning: Where Heart Meets Mind* and authoring *Self-Evaluation: Helping Students Get Better At It*. Her work as an international staff development consultant has focused on classroom and school improvement, and managing education change. Viewed as an international expert in cooperative learning, she has been recognized by students and colleagues locally, nationally, and internationally through numerous awards as an educator who strongly and explicitly bases her teaching on the growing knowledge base about effective teaching while contributing to this research base through her own studies. At the core of Carol's professional work is a genuine and passionate love of teaching.

Robert J. Sternberg, Ph.D.

Robert J. Sternberg is the IBM professor of psychology and education in the department of psychology at Yale University. Sternberg's extensive research into human intelligence, human creativity, thinking styles and, learning disabilities has been transformed into more than 600 publications he has authored or co-authored. He is the founder of the Sternberg Research Group within the Yale psychology department, a program in which students carve out their own unique niche of research in the areas of cognitive, developmental and social psychology. Sternberg is the recipient of many prestigious awards, including the Early Care and McCandless Awards, the Guggenheim Fellowship, Cattell Award, and the Distinguished Scholar Award, and is a fellow of the American Academy of Arts and Sciences, American Association for the Advancement of Science, American Psychological Association and American Psychological Society. He is a member of the CDL Professional Advisory Board.

Glenda C. Thorne, Ph.D.

Glenda Thorne, Ph.D. is the clinical director of the Center for Development and Learning. Her specialty is working with children and adolescents who are experiencing difficulties in school, and their families and teachers. She has delivered numerous seminars on the neurodevelopmental processes related to learning and how to teach students who are struggling in school. She is a co-author of *Mindworks! and How Mine Works*. Prior to her position at CDL, Dr. Thorne was employed by the public school system for several years where she conducted student evaluations and inservice training for teachers. Dr. Thorne has taught psychology and education courses at the University of New Orleans and Southeastern Louisiana University.

APPENDIX

Alice P. Thomas, M.Ed.

Alice P. Thomas, M.Ed. is the President and CEO of the Center for Development and Learning. Under her leadership, the CDL, founded in 1992, was recognized as the 1994 PGA TOUR National Charity of the Year. She is the creator of the PLAIN TALK ABOUT K.I.D.S.© summit and editor of its 1995 and 1997 proceedings. Alice is also the creator of the Learning Connections© school change initiative. She is the lead author of *Mindworks! and How Mine Works*. Over the last 19 years, she has been a teacher, counselor and intervention specialist in public schools systems in Texas, Mississippi, and Louisiana, and has delivered numerous seminars on learning theory, and teaching methods and delivery. She currently serves on the Louisiana Staff Development Leadership Council, the Advisory Board of the Center for Educational Research on Dyslexia at San Jose University, CA, and the Advisory Board for Hallowell Center for Cognitive and Emotional Health in Cambridge, MA.

Priscilla Vail, M.A.T.

Priscilla Vail, M.A.T. is a learning specialist whose work centers on the identification of different learning styles and their accommodation in the regular classroom, small groups, or individual work. She currently gives teacher training and parenting workshops in this country and abroad for individual schools, public school systems, and such organizations as N.A.I.S., Bank Street College of Education, Teacher's College of Columbia University, the Principal's Center at Harvard Graduate School of Education, and Cambridge University in England. She is currently the education director of the Hallowell Clinic for Cognitive and Emotional Health. She has appeared on National Public Radio and her educational articles appear frequently in professional journals. She is the 1998 recipient of the International Dyslexia Association's highest award, for her contributions to the identification and treatment of individuals with dyslexia. Her books include: *Clear and Lively Writing; Smart Kids with School Problem; Words Fail Me; and Emotion: the On/Off Switch for Learning*. Vail is a member of the CDL Professional Advisory Board.

APPENDIX

About the Center for Development and Learning

History

Founded in 1992, the Center for Development and Learning (CDL) is a private nonprofit organization under IRS section 501(c)3. CDL specializes in the development and dissemination of leading edge research, knowledge, training and best practices that impact educational success. CDL's aim is to help all children learn to higher levels and apply their knowledge toward good ends. CDL operates from its Greater New Orleans base in Southern Louisiana.

The Center for Development and Learning was originally conceived to help turn the cycle of frustration and failure into hope and success for children with nontraditional learning profiles. As demands for its services increased, CDL soon realized that its work had broader application to helping all children to learn at higher levels. CDL then broadened its programs and services accordingly.

Mission

CDL's mission is to increase the life chances of all children, especially those at high risk, by increasing school success. CDL's goal is to help all children learn to higher levels and apply their knowledge toward good ends. CDL's objective is to activate and achieve sweeping change in the way all children are taught.

Beliefs and Values

At CDL, we believe that:
- All children are born with an innate drive to learn ñ they want to learn.
- All children can learn to higher levels.
- All children deserve an equal opportunity to learn, including access to diverse teaching methods that allow diverse learners equal access to new skills and knowledge.
- Professionals, parents and community members alike have a moral obligation to expand their ability to help and to work together.
- Education is best when it is personalized and meaningful.
- Knowledge connection and knowledge creation are critical.
- There are no single solutions; complexity is understood as a given descriptor of our work.
- The key question is,"Is it good for the children?"

At CDL, we value:
- A clear moral purpose
- Justice
- Effectiveness (doing the right thing)
- Efficiency (doing things right).
- Goal-oriented action

- Collaborative relationships and teamwork
- Teamwork
- Innovation
- Structure balanced with openendedness
- Systems Thinking

In summary, CDL embraces the ideals of an organization with a focus on making a difference:

- A genuine passion for what we do
- A healthy sense of urgency
- An openness of vision that accompanies risk-taking
- A zest for learning from everything that we do
- A sense of becoming and never merely being
- A deep, abiding belief in people.

Governing Body

CDL is governed by an 18-member Board of Trustees. CDL has an active 15-member Professional Advisory Board composed of national and international experts from educational, psychological, medical and judicial fields. They are as follows:

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Robert Brooks, Ph.D., child, adolescent and family psychologist, Needham, MA; faculty, Harvard Medical School, Cambridge, MA

Katharine Butler, Ph.D., research professor and director, Center for Language Research, Syracuse University, Syracuse, NY; director, Center for Educational Research on Dyslexia, San Jose State University, San Jose, CA

G. Emerson Dickman, III, J.D., attorney at law, Maywood, NJ

Betty Edwards, Ed.D., director, Center for Educational Applications of Brain Research, California State University, Long Beach, CA

Michael Fullan, Ph.D., dean of the Ontario Institute for Studies in Education, University of Toronto, Canada

Jeffrey Gorrell, Ph.D., associate dean of Research and Graduate Studies, College of Education, Auburn University, Auburn, AL

Edward M. Hallowell, M.D., child and adult psychiatrist, instructor in Psychiatry, Harvard University School of Medicine, Cambridge, MA

G. Reid Lyon, Ph.D., director, Research of Programs in Learning Disabilities, Language Disorders, and Disorders of Attention, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD

Bernice McCarthy, Ph.D., president and CEO, Excel, Inc., Consultants for Educational Theory and Technology, Barrington, IL

Howard J. Osofsky, M.D., Ph.D., professor and head, Department of Psychiatry, Louisiana State University School of Medicine, New Orleans, LA

Carol Rolheiser, Ph.D., Associate Dean, Ontario Institute for Studies in Education, University of Toronto, Canada

Robert Sternberg, Ph.D., IBM professor of psychology and education in the department of Psychology, Yale University, New Haven, CT

Priscilla Vail, M.A.T., learning specialist, Bedford, NY

Robert K. Wimpelberg, Ph.D., dean, College of Education, University of Houston, TX

Founder, President and CEO
Alice Thomas

APPENDIX

Programs, Products and Services

CDL's programs, services, and products are organized under three strategic initiatives: *Professional Development, Public Engagement, and Direct Services to students.*

Professional Development

Rationale

With student achievement the focus, the forum is the classroom and the teacher the single most important determinant for improvement in student learning. Further, it is necessary for professionals from the medical and judicial fields to understand how they can impact a more successful learning experience for all students as they interact with children and adolescents.

Goal

To activate and achieve sweeping change in the way all children are understood, respected, treated, guided and taught.

Outcomes

Teachers will be responsive to students' emotional needs and individual differences, more able to inspire intellectual curiosity and thinking. Teachers will build learner-centered classrooms that attend to the needs of each learner. Teachers will use teaching strategies that are aligned with their student's diverse learning profiles. The students will develop learning strategies that produce increased academic success. Students will be engaged in learning. Students will achieve at higher levels. Physicians, judicial professionals and other professionals who work with children will be responsive to children and adolescents' emotional and learning profiles, and will prescribe management and treatment that is more supportive to helping every child reach his fullest potential.

Action

Since 1992, CDL Has:

- Provided research-driven and standards-based professional development to more than 1,350 public and 160 private and parochial teachers and principals for a total of 1,510 educators whose service impacts approximately 50,000 school children.

- Developed and delivered Learning Connections©, a three-year, comprehensive, learner-centered school improvement program that brings research, theory, best practices and active learning into our classrooms to increase student achievement. Presently active in five Greater New Orleans area middle schools, with total faculty of 215 educators serving approximately 3,850 students.

Learning Connections© is one of three programs featured at the 1998 American Psychological Association Annual convention for its incorporation of the Learner-Centered Principles.
Robert Sternberg, IBM professor of education and psychology at Yale University, stated that, "Learning Connections has the most complete collection of material on developing thinking skills that I have seen."

Michael Fullan, dean of the Ontario Institute for Studies in Education at the University of Toronto, stated that the Learning Connections training program "synthesized the latest research and knowledge and is a once comprehensive and accessible, theoretical and practical."

- Developed, coordinated and delivered three *Plain Talk® Summits*, each providing a three-day forum for informed conversation and knowledge sharing among educational, judicial, mental health and medical professionals, community and business leaders, and parents. Held every two years, attendance totals 1,507 persons (1994: 375; 1997: 579; 1999: 549). Participants at each summit indirectly impact approximately 30,000 children. The next summit, to be held February 18-20, 2002, will also include 21 facilitated follow-up discussions that will be open and free of charge to all summit participants

Public Engagement

Rationale

Only an informed public can come to the table and make informed and equitable decisions and thereby take clear, focused and decisive action that will ensure a solid education for all children.

Goal

To engage educators, parents, business leaders and other community members as advocates and actors in improving schools.

Outcomes

An informed and involved public will actively participate in discussions and actions that lead to a more equitable and solid education for all children. The public will call for legislation that will support, restructure and recreate a superior educational system that delivers a meaningful education and allows every child to reach the highest attainment of which he or she is capable. The public will invest their time, talent and treasure to school improvement.

Action

Since 1992, CDL has:

- Developed multiple *public engagement* initiatives whose goal is to engage educators, parents, business leaders and other community members as advocates and actors in improving schools. For example, in 1998, 27 open discussions were held in a five-parish Greater New Orleans area with 1,670 community members, six video news releases were aired on WWL-TV's news shows with four seen by 1,000,000 viewers each and two seen by 500,000 viewers each, and information and referral calls responded to approximately 600 parents, educators and other professionals.

  Gained listing in *Reasons for Hope, Voices for Change*, the 1998 Annenberg Report on Public Engagement, for its initiatives that focus on engaging educators, parents, business leaders and other community members as advocates and actors in improving public schools.

- Developed and maintained an informational and educational website at www.cdl.org. A free electronic monthly newsletter is available through the website.

- Written and published timely educational information through the following publications:
    - 1995 *PLAINTalk Proceedings* (1996). Cambridge MA: Educator's Publishing Service.
    - 1997 *PLAINTalk Proceedings* (1998). Cambridge MA: Educator's Publishing Service.
    - *PLAINTalk*, CDL's educational newsletter, published quarterly Covington, LA: CDL.
    - *Learning Connections Training Binder* (1997, 1998, 2000). Covington, LA: CDL.
    - *Improving Teaching, Improving Learning* (2000). Covington, LA: CDL. This report links results-driven professional development to improved student learning.
    - MINDWORKS!...and How Mine Works (1998, 2001). Covington, LA: CDL. Written for middle, junior high and high school students, this working book is about learning and thinking and learning how you think. 2nd edition. Available summer 2001.
    - MINDWORKS!...and How Mine Works Teacher's Manual (2001). Covington, LA: CDL. Available summer 2001.
    - 1999 *PLAINTalk Proceedings* (2001). Covington, LA: CDL. At press.

- CDL gained listing in the U.S. Department of Education's Educational Resources and Information Center-Clearinghouse for Urban Education (ERIC-CUE).

- Hosted a public policy *Think Tank* on professional development that produced a document designed to influence conversations and decisions professional development efforts in Louisiana.

Direct Services to Students

Rationale

Through its direct services programs and services, CDL will help children, their families and their teachers will better understand the students' cognitive, social and emotional profiles. Further, by showing decisive results from the methodologies we utilize, CDL will increase the desire for these methodologies to be replicated.

Goal

To deliver state-of-the-art direct services that support and empower children, their parents and their teachers in order for each child to become more successful in school and in life.

Outcomes

Children, their families and their teachers better understand how to capitalize on their strengths and compensate for their weaknesses. Teachers and families are more supportive of each child. Teachers are able to use teaching strategies that are aligned with the child's learning profile. The child is able to develop strategies that produce increased academic-and lifetime-success.

Action

Since 1992, CDL has:

- Delivered *Direct Services* to more than 1,150 students, including educational evaluation, consultations, counseling, therapy, and individualized academic instruction.

- Created and delivered the *SmartArt®* program to 269 high-risk students from nine Louisiana public schools. SmartArt students gained art shows at the Contemporary Arts Center in 1998, 1999 and 2000, and a show at Loyola University in 1998.
  SmartArt was one of 50 semi finalists nationwide for both the 1999 and 2000 Coming Up Taller Awards given by the National Endowment for the Arts and the President's Committee on Arts and the Humanities for programs that help at risk students through the arts and humanities.

APPENDIX

Call to Action

Membership has its benefits. As a member of the CDL, receive the PlainTalk newsletter, special discounts on items ordered from the CDL's A+ web store (www.cdl.org), participate in chat room discussions with CDL staff and special guests like Bob Brooks and Michael Fullan, and obtain education-related articles written by the pros.

Join CDL today and you will be supporting its work while you enjoy its membership privileges.

Membership privileges:

- CDL's PLAIN *Talk* quarterly newsletter
- 20% discount on CDL sponsored events such as PLAIN *Talk 2002*
- 10% discount on all items in CDL's educational A+ online store (www.cdl.org)
- Weekly members-only online chats with CDL professional staff where you can ask specific education-related questions about your children, your students, or yourself and get specific answers about learning, teaching, strategies, management, resources, and more.
- Monthly members-only online bulletin board system where you can post questions and get answers, tips and other advice on monthly topics from CDL professional staff.
- Quarterly members-only online bulletin board system where you can post questions on quarterly topics (LINK to quarterly bulletin board topics) and get tips and other advice from CDL Professional Advisory Board Members.

☐ $25 Student - all the privileges of membership
☐ $50 Individual - all the privileges of membership
☐ $60 Family/Dual - second membership for only $10! Both enjoy al the privileges of membership
☐ $90 Friend/Supporter - all the privileges of membership plus listing on the CDL website
☐ $175 Organization/School - a site license for membership privileges of all professional staff. (For a staff of 25, that's a $1,250 value.)
☐ $250 Advocate _ All the privileges of membership, plus listing on the CDL website and the CDL newsletter
☐ $500 Guardian - All the privileges of membership, plus listing on the CDL website and the CDL newsletter and annual report
☐ $1,000 Corporate Sponsor - All the privileges of membership, plus listing on the CDL website and the CDL newsletter and annual report

You may register online (www.cdl.org), or you can fill out this membership form, cut along dotted line, enclose in an envelope along with check, and mail to: Center for Development and Learning, 208 South Tyler Street, Covington, Louisiana 70433.

Name____
Address____
City______________________State________Zip______________
Home Phone (____)______________ Work (____)______________

Enclosed is my check made payable to the CDL for $_______________.
Charge $_______ to my:
______Visa ______ MC ______ Discover ______ AE

Name on card____
Account #____
Exp. Date____
Signature____

All donations are used to help underwrite the costs to develop, expand and improve the CDL's programs and service.

CDL is a 501(c)3 nonprofit organization.

Contact CDL:

Center for Development and Learning
208 S. Tyler St.
Covington, LA 70433
Phone 985-893-7777
Fax 985-893-5443
E-mail learn@cdl.org
Website www.cdl.org

If you want additional copies of this book, please go to our online store (www.cdl.org), or complete the form below:

Name____
Address____
City______________________State________Zip______________
Home Phone (____)______________ Work (____)______________

Cost per book is $27 for members, $30 for nonmembers, plus $5 each for shipping. Enclosed is my check made payable to the CDL for $________.
I want ______ books. Charge $_______ to my:
______Visa ______ MC ______ Discover ______ AE

Name on card____
Account #____
Exp. Date____
Signature____

At CDL, we are in the business of saving children's lives.

LEARN EXCITING TEACHING IDEAS TO EDUCATE YOUR STUDENTS OR CHILDREN.

The Education Desk Reference is a rich resource for teachers, principals, parents, and business and community leaders that brings together a plethora of research, best practices, and solutions to improve student achievement.

The Education Desk Reference is the collection of presentations made at the biennial PLAINTALK Summit. Experts in the fields of education, medicine, justice, and psychology discuss critical and emerging issues about teaching and learning that affect every child's success in the classroom.

Learn from the best. Chapters by Michael Fullan, Reid Lyon, Robert Sternberg, Robert Brooks, Ned Hallowell, Priscilla Vail, Charles Achilles, Emerson Dickman, Anne Henderson, other educators, psychologists and physicians make this an indispensible desk reference on current issues in education. Also included are open discussions on critical educational issues such as the professional development of teachers, parent involvement, and equity.

Through this book, you'll learn how to:

- Share. Bring new information on teaching and learning to the school and classroom.
- Connect. Apply new research and knowledge to build classrooms that stimulate, motivate and educate.
- Recreate. Implement strategies to teach diverse children with diverse learning profiles. Educate today's learners for tomorrow's future.

The Center for Development and Learning (CDL) is a private nonprofit organization whose mission is to improve the life chances of all children, especially those at high risk, by increasing school success. CDL specializes in the development and dissemination of leading edge research, knowledge, and best practices that impact educational success.

I believe the key to improving education lies in the collaborative, connective sharing that went on at the summit. I am a college professor and I am fired Up!

College professor, Louisian

"PlainTalk is a rich resource of stimulating collaboration across professional disciplines. As we work to understand and respond to struggling children, it is a mandate to professionals and parents to synthesize their expertise."

Edward M. Hallowell, M.D
Harvard Medical School, M

"As a parent among teachers and professionals, I was thoroughly energized and inspired and will recommend and share it with other parents and educators."

Parent, Louisian

"The multidimensional nature of the summit was a great strength. Too often, we as educators have little contact with the legal and medical fields."

Teacher, Louisian

"PlainTalk brought together those who know and those who want to know. The *Education Desk Reference* brings to those the opportunity to to be part of a group of researchers, practitioners, and professionals who gathered under the same roof to produce practical solutions to difficult problems."

Katharine Butler, Ph.D
Syracuse University, N

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